

GOLDEN QUEEN MINING COMPANY INC.

**SOLEDAD MOUNTAIN PROJECT
MOJAVE, KERN COUNTY, CA.**

**Conditional Use Permit Application
Environmental Information
Surface Mining Reclamation Plan
and
Plan of Operations**

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VOLUME IV



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**PHASE I ARCHAEOLOGICAL SURVEY OF THE GOLDEN QUEEN MINE
PROJECT AREA, MOJAVE, KERN COUNTY, CALIFORNIA**

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Management Summary

A Phase I archaeological survey was conducted for the Golden Queen Mine project area, which is located on Soledad Mountain, Mojave, Kern County, California. This involved background studies of published and unpublished reports, documents, maps and other records concerning the prehistory, ethnography and history of this area; an intensive on-foot survey of the study area; and the recording and preliminary evaluation of archaeological sites discovered during this survey. Eight archaeological sites were found to lie within this study area, with a portion of a ninth also located within the study zone. All of these sites are historical (Euro-American) in age, and result from the 20th century mining that has occurred at this locale. These sites are designated CA-KER-4446H, -4447H, -4448H, 4449H, -4450H, -4451H, -4452H, -4453H and -4454H. Due to the presence of these historical sites, the Golden Queen project has the potential to result in adverse impacts to cultural resources. It is therefore recommended that a Phase II test excavation and determination of significance be conducted at each of these sites, from which final recommendations for the management of these sites may be made.

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PHASE I SURVEY OF THE GOLDEN QUEEN PROJECT AREA, MOJAVE, KERN COUNTY, CALIFORNIA

1.0

INTRODUCTION

At the request of Mr. Paul Blair, Golden Queen Mining Company, Rosamond, California, a Phase I archaeological survey was conducted for the Golden Queen project area, Kern County, CA. The Golden Queen project area comprises a block of private property totaling approximately 600 acres, located on the northern side of Soledad Mountain (Figure 1), near Mojave in the southwestern portion of the county. The inventory of this study area was conducted by W & S Consultants, Simi Valley, CA. David S. Whitley, Ph.D., served as principal investigator for this study; he was assisted by Joseph M. Simon, Robert B. Rechtman, Ph.D., and Tamara K. Whitley, M.A., during aspects of the fieldwork, archival investigations and analytical studies. D.S. Whitley is responsible for the authorship of this report.

Following the requirements of Appendix K of the California Environmental Quality Act (CEQA), the Phase I survey of the Golden Queen project area involved background studies of the prehistory, ethnography and history of the Kern County region; detailed archival studies of published and unpublished articles and documents on the study area, per se; a review of archaeological records at pertinent repositories; the recording of interviews with and oral histories from local residents; a complete (100%) survey of

the project area; and the identification and recording of sites within this approximately 600 acres study zone. The following sections of this chapter provide details on the background and contextual studies conducted for this inventory; specifically, a summary of regional prehistory, ethnography and history, and a research design for archaeological study in this portion of the Mojave Desert. We also provide details of the archival studies and interviews and oral histories recorded for this project, particularly as directed towards the mining history of the study area. In the following chapter we provide details of the archaeological records search, conducted at the California Archaeological Inventory, Southern San Joaquin Valley Information Center, followed by a description of fieldwork methodology utilized during the inventory of the property. A description of identified historical and prehistoric sites is then presented, which includes a discussion of their current integrity. We conclude with a summary of the results of the field inventory, and recommendations for additional cultural resource management studies within this project area.

1.1 Background Studies

1.11 Environmental Setting

The Golden Queen project area is located on the northern side of Soledad Mountain, which forms a northward extension of the Rosamond Hills in southeastern Kern County, California (Figure 1). It consists of the majority of Section 6, Township 10 North, Range 12 West, with minor strips (200 feet wide) of adjacent Sections 5 and 7 also included. Excluded from the current study area within Section 6 are publically owned lands

administered by the BLM. These excluded portions include three discontinuous zones: the western side of the section and northwestern corner; and two smaller zones on the east and southern side of Section 6.

Physiographically, the study area is located slightly to the south of the Garlock Fault, and thus within the Antelope Valley (or western) portion of the Mojave Desert. More specifically, the study area sits within a zone of very steep and rugged terrain, with elevations ranging from in excess of 4190 feet a.s.l. on the southeastern side of the project area to 2793 feet a.s.l. in the northeastern corner. Generally, terrain dips from south to north, with the high peaks and ridges of Soledad Mountain comprising the southern and eastern portions of the study area, and the open flats of the Mojave Desert to the north and west.

Vegetation within the study area is primarily desert sage scrub, with creosote, spiny hopsage, mormon tea and, in disturbed areas, Russian thistle, present. During the survey a series of annual wildflowers were also in evidence.

In general, the ruggedness of the terrain, combined with the absence of natural resources such as seeps and springs or riparian environments, suggest that the study area would have constituted an unlikely location for prehistoric occupation, although occasional use can be assumed (e.g., for quarrying activities). Moreover, the diurnal and seasonal extremes that characterize this area, along with the rapid downslope colluviation engendered by the steep terrain, indicate that it is a region in which prehistoric archaeological site preservation would be relatively poor, especially for sites of any antiquity. Historical (i.e., Euro-American)

archaeological sites, of course, are by definition more youthful, and thus less likely to have been destroyed by natural processes. Furthermore, historical activities in this region were much less tied to the same environmental constraints experienced by the prehistoric and ethnographic Native American populations, thus the nature of their distribution can be expected to in some cases vary significantly from that of the Native American sites.

1.12 Regional Prehistory

Recent regional summaries of the Antelope Valley prehistory have been published by Sutton (1988a, 1988b), with syntheses of the related Coso area immediately to the north published by Whitley et al (1988) and Whitley (1994). Based on these studies, as well as the more wide-ranging cultural historical frameworks for eastern California provided by Hester (1973), Bettinger and Taylor (1974), Warren (1984) and Elston (1982), regional prehistory can be discussed in terms of a series of cultural historical periods, starting with the earliest evidence for human occupation in the western hemisphere.

Pre-Clovis (earlier than 11,200 YBP)

Perhaps the most long-lived problem in New World prehistory has been the question of the antiquity of first occupation, with two positions dividing the discipline: the Pre-Clovis or long chronology, which posits a Late Pleistocene first-migration at some undetermined point prior to 11,200 YBP (years before present); and the Clovis-first or short chronology hypothesis, which argues for an initial migration at the immediate end of

the Pleistocene, now set at 11,200. Historically, the the Mojave Desert region has played an important role in this debate, due to the presence of putative early sites in the Manix Lake Basin, in Panamint Valley and around Pleistocene Lake China. E.L. Davis (e.g., 1978), in particular, argued for the presence of Pre-Clovis sites in the region based on three lines of evidence: typological similarities between surface lithic tool assemblages in this region and well-dated typologies in the Old World; the locational context of certain surface sites on well-dated Pleistocene lake terraces and sediments; and the association between surface cultural artifacts and dated paleontological remains.

Because Davis' evidence was based exclusively on surface finds that were, themselves, never directly dated using chronometric techniques, as well as typological comparisons, her conclusions were not widely accepted in the profession. However, more recently developed evidence (Whitley and Dorn 1988, 1993) suggests an occupation of the Coso Range at least as early as 19,000 YBP, and perhaps as early as 30,000 YBP in the Mojave Desert generally. These dates were obtained from the direct dating of the rock varnish coating petroglyphs and surface lithic tools, using three independent chronometric techniques: cation-ratio dating, which provides calibrated ages; AMS radiocarbon dating, which provides numerical dates; and the analysis of varnish micro-stratigraphy, which provides relative age control.

Based on these techniques, Whitley and Dorn have obtained a suite of six Pre-Clovis age petroglyphs from the Coso area, in addition to a number of Holocene-dated specimens. The Pre-Clovis petroglyphs include dates that have been confirmed by independent assays on the same petroglyph,

using each of these different techniques. For example, petroglyph CM-8 has a radiocarbon age (uncalibrated) of $14,070 \pm 130$ YBP (calibrated age, 14,930 YBP). The cation-ratio age on this same petroglyph is $14,200 \pm 1700$ YBP, thus providing independent one-sigma confirmation of the Pre-Clovis date. Most recently, advances in the analysis of varnish micro-stratigraphy allow for the identification of diagnostic temporal signals in SEM varnish thin-sections. Key micro-stratigraphic signals are present in the varnish thin-sections at the Pleistocene-Holocene transition, and at approximately 14,000 and 21,000 YBP. Coso petroglyphs dated between 14,000 and 19,000 based on AMS radiocarbon and cation-ratio dating display the 14,000 micro-stratigraphic diagnostic but not the 21,000 YBP signal, thus demonstrating that the chronometric techniques are correctly placing them in the proper part of the Pleistocene.

Similarly, a series of Pre-Clovis varnish ages have been obtained on surface artifacts from the Manic Lake Basin (Dorn et al 1986; Bamforth and Dorn 1988; Dorn et al 1992; Whitley and Dorn 1993). These include Manix Lake Lithic Industry specimens that have been independently dated with cation-ratio and AMS ^{14}C (and with confirmations provided by varnish micro-stratigraphic analyses) that include examples with CR and AMS ages falling within one-sigma standard deviations, and refit flake-core sequences that exhibit internal variances for their CR dates of less than 5%. The ages of these Manic Lake Lithic Industry dates extends back to roughly 30,000 years B.P.

Although there is some controversy concerning these early dates from the Cosos and other parts of the Mojave Desert, no cogent argument has been

advanced explaining why they may be incorrect. Indeed, the most typical problem that confronts radiocarbon dating, contamination, would in this case result in younger, not older, ages, thus substantiating the Pre-Clovis argument. Moreover, there are a certain related circumstances that greatly bolster the Pre-Clovis position (Whitley and Dorn 1993). First, attention to the geomorphology and paleoclimatology of the latest Pleistocene indicates that the Pre-Clovis period was one of net erosional degradation. Lowered eustatic sea-levels combined with a series of major flood events resulted in the stripping of sediments in major portions of North America, rather than the gentle forms of deposition that are required for archaeological site preservation. An exception to this pattern occurred in the Basin and Range Province, where stable alluvial fans preserve Late Pleistocene groundsurfaces. Boulders and cliff faces containing rock art, as well, were also not subjected to this erosional destruction. Thus, there are very few extant geomorphological contexts within which Pre-Clovis finds could be expected to be found. This explains why there is a sudden "explosion" of Clovis age sites and a relative dearth of Pre-Clovis sites in the archaeological record: the Clovis sites appear at exactly the point when the geomorphological conditions change to favor site preservation. Second, archaeological evidence from South America has included a number of well-dated Paleoindian sites falling between 10,000 and 11,200 YBP. As has been pointed out recently, it would have been physically impossible for first migrants to have entered North America sometime after 12,000 YBP and to have colonized South America within 1000 years; this would require rates of population growth unheard-of for human beings, and migration speeds that are manifestly implausible (Whitley and Dorn 1993). Thus, even the South American Paleoindian evidence tends to discount the likelihood of the short chronology for the

peopling of the New World.

Although the evidence, accordingly, is mounting for the Pre-Clovis occupation of eastern California, at this point there is relatively little that can be said about this occupation, beyond the simple fact of its presence. Until additional evidence is presented, then, we will not be able to determine whether Pre-Clovis peoples were sedentary or mobile, or big-game hunters versus foragers.

Paleoindian (11,200 - 9000 YBP)

Although the initial occupation of the continent is controversial, there is widespread agreement on the subsequent Paleoindian period, which is typically viewed as pertaining to mobile big-game hunters who exploited Pleistocene megafauna. The hallmarks of the Paleoindian period are the fluted, collaterally-flaked and basally-thinned and -ground Clovis and Folsom projectile points, during the earlier portions of the period, followed by a series of large, well-flaked but unfluted lanceolate points towards the end of the period. Some scenarios suggest that the big-game hunting practiced by these Paleoindian peoples may be responsible for the extinction of the Pleistocene megafauna, such as Imperial Mammoth, Bison antiquus, and the North American horse; however, recent evidence indicates that the earlier portions of the Paleoindian period comprised a lengthy and severe drought, thus demonstrating that the large mammal herds were already under extreme environmental stress, regardless of the effects of human predation (Haynes 1991). Regardless of the so-called Pleistocene overkill problem, the image of Paleoindians as specialized big-game hunters has become pervasive for North America.

Limited evidence of Paleoindian use of eastern California has been found in a number of areas, including Pilot Knob Valley, immediately to the south of the Garlock Fault; on the shores of Pleistocene Lake China, near Ridgecrest; Fort Irwin, east of Barstow; and, most recently, in the El Paso Mountains, southwest of the Panamints (e.g., Davis 1978; Warren and Phagan 1988; Yohe 1992b). Typically, this evidence consists of isolated (in some cases reused) Paleoindian projectile points, although there is also evidence for Paleoindian petroglyph manufacture in the Cosos (Whitley and Dorn 1987, 1988), with unpublished and at this point unverified reports of megafaunal depictions in the art. Furthermore, an obsidian Paleoindian point from the central Mojave Desert has been sourced to the Coso Sugarloaf Quarry (Sutton and Wilke 1984). These isolated finds and occurrences at a minimum are indicative of at least sporadic Paleoindian use of the region.

Although it is likely that more substantial Paleoindian habitation sites are somewhere preserved in the region, they have yet to be found and a better understanding of the Paleoindian period in this portion of eastern California will only be obtained when such sites are discovered and investigated (cf. Warren and Phagan 1988). In the meantime, growing evidence for Paleoindian occupation, in the form of two Clovis-like projectile points, has been discovered immediately northwest of the Antelope Valley (Glennan 1971; Zimmerman et al 1989), as well as on the off-shore Channel Islands (Morris and Erlandson 1993). With the maritime adaptation this last find implies, it suggests that the monolithic interpretation of all North American Paleoindian period sites as necessarily a product of specialized big-game hunting may be incorrect, and that more regional subsistence variation may emerge once better evidence from the

far west has been discovered and analyzed (cf. Willig and Aikens 1988).

Early Archaic (9000 - 6000 YBP)

The Early Archaic period, or so-called Western Pluvial Lakes Tradition, represents the early Holocene in paleoenvironmental terms. Its hallmark is the widely dispersed but ambiguously-dated Western Stemmed Tradition projectile points. These include the local variants known as Lake Mohave and Silver Lake points, which may in fact actually date between 10,500 and 7,500 YBP. Combined with studies of the lithic technologies of Early Archaic and Paleoindian sites, this chronological overlap suggests that the Western Stemmed Tradition was an in-situ development out of the earlier Paleoindian tradition (Willig and Aikens 1988).

Early Archaic sites are most commonly found on the lowest terraces above latest Pleistocene and early Holocene lake basins and stream deltas. They are, accordingly, widely regarded as part of a lacustrine-focussed adaptive strategy. Although a number of authors have cautioned against too simplistic an interpretation of these associations, pointing out the fact that Early Archaic sites are also found in other environments, it nonetheless is apparent that, in eastern California at least, this environmental association and its inferred subsistence implications maintain some verity. Indeed, it can be noted that recent research in the Great Basin has exactly emphasized the general importance of lacustrine adaptations, in contrast to Jennings' (1957) earlier model of a long-lived "desert culture" tradition.

Be these controversies as they may, Early Archaic projectile points are occasionally found in the Antelope Valley, but the sites themselves are

relatively rare, and instead are more common to the Basin and Range country proper, to the north. For example, Davis (1978; Davis, Brott and Weide 1969) has identified and discussed the importance of a number of putative Early Archaic sites in the Panamint region. These are located in both the China Lake Basin and the Panamint Valley in former lacustrine environments, and are indicative of the fact that some lakeshore use if not occupation did occur during the early Holocene in this region. However, this must be matched against the fact that Western Stemmed Tradition points have also been recovered as isolates in upland environments in the Cosos (Elston et al 1983). Thus, although lakeshore exploitation may have been an emphasis during the Early Archaic in eastern California, this apparently also incorporated mobile hunting into other environments as well.

Middle Archaic (6000 to 4000 YBP)

Be this early evidence as it may, what is incontrovertible is that, regardless of date of initial occupation, substantial inhabitation did not occur until much later, with the start of the Middle Archaic or Pinto Period, at about 6000 years B.P. This lasted until approximately 4000 years B.P. A number of sites from this time period are known from the Rosamond area, specifically associated with the prehistoric shoreline of Rosamond Lake. Notably, sites dating to this time period apparently emphasize the use of rhyolite as a lithic resource, almost to the exclusion of crypto-crystallates, such as chert and jasper.

The Middle Archaic, however, corresponds essentially to the Altithermal paleoenvironmental period, and is a controversial topic in Mojave desert prehistory due to its cultural and chronological ambiguity. Much of the

ambiguity stems from the uncertainty in the chronological placement of the Pinto series projectile points. Seemingly, there are as many chronological scenarios for the placement of Pinto points as there are archaeologists working on the problem (cf. Meighan 1981; Jenkins and Warren 1984). What this ultimately may suggest is that much more regional variation existed during certain periods of the prehistoric past than is currently being recognized.

In the Coso area to the north, but not necessarily elsewhere in eastern California, there is little if any evidence for Middle Archaic occupation, at least if Meighan's (1981) obsidian hydration date revisions for the Pinto series points from the Little Lake site are accepted. That is, existing evidence could be interpreted to signal a diminuation in occupation, if not an outright abandonment, in this region, apparently corresponding to the hot and dry climatological conditions of the Altithermal. However, it is also possible that local inhabitants may have adopted a subsistence strategy and settlement pattern with little archaeological visibility on the landscape during this period; e.g., a highly mobile pattern. Although this alternative interpretation of the apparent dearth of Middle Archaic sites must be acknowledged, it seems implausible in light of the fact that extremely dry conditions would be more commonly predicted to result in a stronger form of "tethered nomadism", and thus greater archaeological visibility, around water sources. Moreover, there is clear evidence for Middle Archaic settlements in the Fort Irwin area (e.g., Jenkins and Warren 1984), to the east of Barstow, suggesting that not all portions of eastern California were abandoned at this time; again, emphasizing the possibility of more regional variability than heretofore acknowledged.

Late Archaic (4000 to 1500 YBP)

Much less controversy surrounds the subsequent Late Archaic period, or Elko Period, lasting from about 4000 to 1500 years B.P., which correlates with improved and wetter environmental conditions across the far west. Although sites from this time period are sometimes considered rare in the Mojave Desert, it is notable that many of the subsequent Rose Spring Period villages (see below) were first occupied during this earlier phase. That is, as has been noted by a number of authors, there seems to be a strong continuity between the Elko Period and subsequent times, with the latter period materials masking or burying the Elko remains. In the Antelope Valley region this begins with a major increase in population beginning about 3000 years B.P. (Sutton 1988b:23).

Similar patterns have been noted in surrounding regions. For example, the start of the Late Archaic in the Coso Range region is posited to represent the initial establishment of the primary settlement and subsistence systems that are currently archaeologically visible (Whitley 1994), while this same period has been recognized as experiencing a major, far western North American-wide expansion of settlements into new environments and increases in population, stretching from the Great Basin of eastern California, through the southern Sierra Nevada, across the Transverse Ranges, and down to the coast (Whitley, Gumerman and Simon n.d.). The primary temporal diagnostics for the Late Archaic are Elko and Gypsum series projectile points.

In the Coso Range, the Late Archaic is signaled by the establishment of major winter villages, typically at springs, in valley bottoms on the western and wetter side of the range. Analyses of paleoethnobotanical and

faunal remains suggest a generalized foraging strategy, emphasizing all available resources (e.g., Gumerman 1985), including buckwheat stands around small mud-playas (Whitley et al 1988). This evidence is complemented by an extensive but seemingly non-logistically organized use of all upland environments. Included here is a significant quantity of isolated projectile points in the uplands, suggesting mobile hunting patterns (Elston et al 1983). Furthermore, the Late Archaic witnessed the beginning of the intensive exploitation of the Coso Sugarloaf obsidian quarry, an event that apparently correlates with the beginning of the inland-to-coastal obsidian trade in south-central California (Whitley, Gumerman and Simon n.d.).

Rose Spring (1500 - 800 YBP)

The Rose Spring Period is differentiated from the earlier Late Archaic/Elko Period by the introduction of the bow and arrow and a change from spear points to arrow points at circa AD 500 (cf. Yohe 1992). This transition is, in technical terms, dramatic. In fact, the introduction of this new weaponry technology probably did not have any immediate major impacts on social or cultural systems. At least initially, the settlement and subsistence systems were stable, and lithic technology and production did not noticeably change (Allen 1986).

Moreover, and as implied above, in all other respects Rose Spring times appear to have been a continuum from the earlier patterns, so that the change in hunting technology was probably less important than we might otherwise presume. Within the Antelope Valley area, Desert Village Complexes, representing a major change in magnitude of settlements, were founded at least by Rose Spring times, and perhaps towards the end of the

earlier Elko phase. Two of these have been identified by Sutton (1988a, 1988b) in the foothills of the Antelope Valley, with a third between Rosamond and Rogers Dry Lake, and a possible fourth at Koehn Lake. It is possible, if not likely, that these represent the founding of the triblet system of political organization in the region.

At approximately AD 1000 - 1200, however, a shift in settlement and subsistence practices began that, ultimately, culminated in the protohistoric/ethnographic patterns referred to as the Latre Prehistoric or Numic Period (discussed below). This involved the abandonment of some winter villages (or at least a reduction in the intensity of their use); the establishment of logistical base camps around springs in the upland environments; an increasing emphasis on a relatively specialized diet focused on seeds and the pinyon nut; and a great increase in the production of petroglyphs (Whitley 1994). That is, settlement patterns became more organized and focused, while subsistence was increasingly specialized, and ritual became more common.

The causes for this transition are not yet fully understood. Bettinger and Baumhoff (1982), for example, have accepted it as an empirical fact, with the subsistence change then linked to the putative spread of Numic peoples out of eastern California at about this time. They have then taken the position that the phenomenon to be explained is not the cause of the subsistence change, but the reasons why such a change was adaptively more successful, and how it can then be used to account for the historical distribution of Numic languages. The implicit assumption in such an approach is that evolutionary transitions are to be expected due to the inherent tendency for greater fitness to emerge in populations.

While this last tendency may or may not be so, it overlooks pertinent related evidence; namely, that this same time period experienced a major drought that effected all portions of western North America, from northern Mexico through the Southwest, across the Great Basin, and even into the Channel Islands. Moreover, the environmental stress engendered by this drought has been cited as a causal factor in the abandonment of Anasazi pueblos in the Southwest, as well as the southward retreat of Mesoamerican civilization with the collapse of Tula. Perhaps more to the point, Arnold (1993) has noted the influence of this drought in creating resource stress that was a contributing factor to the appearance of a simple chiefdom in the Chumash region near Santa Barbara. Similarly, Whitley (1994) has argued that this transition in eastern California represents the first appearance of Numic bands and headmen; specifically, that it was the increasing perceived need for ritual specialists in the form of rain shamans during this period of environmental degradation that led to the establishment of bands and the creation of headmen. In this interpretation, the accelerated production of Coso petroglyphs (which are known ethnographically to have been tied to rain shamanism) is taken as a reflection of the growing number of ritual specialists, with the appearance of a logistically-oriented settlement pattern a sign of increasing sociopolitical control and organization.

Late Prehistoric (800 - 140 YBP)

The Late Prehistoric (or, in some areas, Numic) Period, from 800 years B.P. to the Historic Period, represents a continued growth in local population, with numbers of people apparently quite high. It is distinguished from

previous Rose Spring times by the introduction of brownware ceramics and a change in projectile point types: from Rose Springs types to Desert Side-Notched and Cottonwood Triangular. Sutton (1988a, 1988b) notes that a boundary of some sort developed during this period: Desert Side-Notched points, brownware ceramics and obsidian are all common from the Fremont Valley northward; south of this area, in the Antelope Valley proper, ceramics and obsidian are rare, and Cottonwood Triangular points are the predominant projectile point type. This apparently correlates with similar patterns further towards the coast: at about 800-1000 years ago the desert-to-coast obsidian trade dried up, and Rose Spring-like projectile points were replaced by Cottonwood-like points, with Desert Side-Notched points rare.

The Protohistoric/Historic phase of the Late Prehistoric, representing the last 300 years, is apparently marked by a major disruption in indigenous settlement, and a corresponding paucity of sites. According to Earle (1990), missionization pulled many of the region's inhabitants away. Subsequently, the Antelope Valley area was used as a staging ground for rustlers and other miscreants, who were raiding the missions' livestock. The result was that the area became somewhat of a no-man's land which, no doubt, has also contributed to the paucity of ethnographic information on it.

1.13 Regional Ethnography

The Antelope Valley and environs are, unfortunately, one of the most poorly known regions, ethnographically speaking, in California, which is a

state that is generally renowned for the detail of its ethnographic record (cf. Kroeber 1925). Thus, the valley contrasts quite sharply with certain of its immediately surrounding areas, such as the southern Sierra Nevada to the north, for which there is a wealth of ethnographic reports and data, and even the Santa Barbara Channel region to the west/southwest. Even though the ethnographic inhabitants of this last area were disrupted very early-on by missionization, our record of their life ways is nonetheless more complete than for the groups that inhabited the Antelope Valley. Luckily, some of the early confusions and misconceptions concerning even such fundamental problems as who the ethnographic inhabitants of the Western Mojave Desert area actually were are now becoming clarified. Earle (1990), in particular, has done much to disentangle previous misconceptions concerning the ethnolinguistic affiliations of the Antelope Valley's inhabitants, and a summary of his recent ethnohistorical conclusions provides an appropriate overview for the aboriginal history of the region.

According to Earle's reconstruction, the Valley was inhabited during the Historic/Protohistoric period by three distinct language-speakers, one group of whom could be further subdivided into two (and perhaps three) fairly distinctive dialects. The most significant linguistic division existed between the Kawaiisu speakers, who lived in Tehachapi Valley, through the southern Sierra Nevada and eastward across Fremont Valley towards Red Mountain and into southern Panamint Valley, and the groups to the south and west in Antelope Valley per se. The Kawaiisu language is a member of the Numic branch of the Uto-Aztecan language family, and is thereby most closely related to the Shoshonean and Paiute languages of the Great Basin.

South and westward of the Kawaiisu were two other members of the Uto-Aztecan language family, but in this instance both were distinct languages belonging to the Takic (as opposed to Numic) branch, specifically to the Serran Takic branch. Along the southwesternmost side of the valley, including the northern foothills of the Liebre Mountains and the southern side of the Sierra Pelona, were the Tataviam, a little-known group identified due to the existence of a few early word lists. Related to them linguistically, but speaking a distinct language, were the better-known Kitanemuk, who occupied the western Antelope Valley and the Tehachapi Mountains west of Tehachapi Pass. Living to the east of the Kitanemuk, who extended to approximately the current location of Highway 14 where it heads north across the Valley, were a group of closely related peoples that Earle (1990) has identified as the Haminat. Apparently, Haminat and Kitanemuk represent dialects of the Serrano language, which also included Serrano proper and Vanyume (or Beñemé).

According to Earle's analysis, there was a linguistic continuum along the northern side of the San Gabriel Mountains in the Western Mojave Desert, from the Serrano through the Vanyume and Haminat to the Kitanemuk, at the western end. Haminat, apparently, was more closely linked with Vanyume/Serrano proper than Kitanemuk, although it was still simply a dialectical variant of it. But, with the Serran continuum along the northern side of the San Gabriels, and with all of this linguistic variation present during the Historic period, it is easy to understand how ethnographic confusion developed in regards to this region.

The Golden Queen study area falls near the boundary of Kitanemuk and

Haminat territories, and may have, at different times, been used by both groups. Perhaps more important than these minor linguistic distinctions, similar cultural patterns were followed by all the inhabitants of the region, with certain minor distinctions. In terms of subsistence, for example, all groups were foragers, with food sources derived principally from gathering. The exact plant species exploited was dependent on seasonal availability, as well as geographical/environmental location. In the higher, montane portions of the region (e.g., towards Tehachapi and along the slopes of the San Gabriels), acorn-bearing oak and pinyon pine nuts were staples. In the lower lying, more desertic zones, mesquite, yucca and a variety of other edible plants were emphasized. Hunting also contributed meat protein, and principally emphasized small game, such as hares, rabbits and rodents. However, the notion that these hunter-gatherers based their subsistence to large degree on big-game hunting (such as deer, antelope and mountain sheep) has proven to be an anthropological myth.

Cultural commonalities were also maintained in religious beliefs and practices, which were uniformly based on shamanism. This is predicated upon perceived direct and personal interactions between an individual and the supernatural world, with this interaction founded on entering an altered state of consciousness. Shamans, per se, were ritual specialists who held an unusual degree of interaction with the supernatural world, and thereby acquired a high degree of supernatural power. Although formal rituals and ceremonies were limited in number and elaboration, the shamans served as the ritual officers for these. Further, the shamans also were responsible for painting and pecking the rock art that is found in this region: rock art sites served as their vision quest locales, where the shamans entered trances to have visions and thereby acquire supernatural

power. And, the art depicted at these sites displayed the visions and spirits they saw in their altered states of consciousness (Whitley 1988, 1992).

Following general California patterns, there were also a number of similarities in social and political organization across the Antelope Valley. Earle (1990) has suggested that the Haminat may have been organized into exogamous clans and moieties, whereas the western groups might have lacked these, and in this sense the Haminat could have been more like the southern California Desert groups like the Serrano and Cahuilla, with the other groups more similar to the south-central California culture of the Chumash and related peoples. However, given that the exact social organizational systems of the Chumash have yet to be defined (for example, there is still debate whether they were matrilineal or patrilineal), and since we do not yet know whether they had a moiety system or lacked it entirely, it may be too early to draw such fine-grained distinctions concerning social organization.

What is apparent, however, is that the region as a whole apparently lacked any political organization beyond that of the tribelet, or what Earle has identified in the Spanish records as naciones. These were autonomous land-owning groups, focused on a principal village and led by a headman or chief, and probably comprising a lineage system or clan. In this sense, the Antelope Valley can be said to follow the political organizational pattern found throughout most of Native California. This, of course, further links it with Californian, as opposed to Great Basin, cultural patterns.

1.14 Historical Background

Perhaps because of the use of the Antelope Valley as a staging area for Indian raids on the estancias and missions closer to the coast, Euro-American settlement and development of the area was a little later dating than in other parts of southern California. As a result, the history of the Antelope Valley to about the 1860s principally involved various explorers who traversed it: for example, Pedro Fages crossed the southern valley in 1772; Fr. Garcés crossed the west end and went through Willow Springs (southwest of the Golden Queen study area) in 1776; Jedediah Smith, similarly, went across the western valley in 1827 and also visited Willow Springs, as did John C. Fremont and his guide Kit Carson in 1844. The Rogers and Manly party - the Jayhawkers or Death Valley '49ers - camped at Willow Springs towards the end of their dramatic 1849 expedition across the Mojave Desert, as well. And Lt. Edward Beale, at the lead of a caravan of camels, came across the southern side of the valley in his 1857 trip to Fort Tejon (Bancroft 1963; Settle 1963:61; Boyd et al 1982).

It was not until the 1860s that the first settlers moved into this region, settling mostly in the Elizabeth Lake region and the southern foothills of the Tehachapi Mountains, and involved principally in ranching. With the development in 1868 of the Cerro Gordo silver mine in Inyo County, however, the Antelope Valley became a major thoroughfare for the movement of bullion and goods between Los Angeles and the Owens Valley (Chalfant 1933); indeed, efforts to wrestle control over the Inyo silver trade away from Los Angeles became a major theme of California economic history in the 1870s (Nadeau 1965). Los Angeles managed to

maintain its monopolization of this trade, nonetheless, with Remi Nadeau's freight-line playing a major part in the transshipment of goods and ore across the valley. Willow Springs and its adobe tavern, again, served as a major stop on this route, with the stage line then essentially heading south (on the route that would eventually be adopted by the railroad), for a 28 mile stretch through Cow Hole to Barrel Springs, at the mouth of Soledad Canyon, and subsequently through the canyon for the uphill climb through the San Gabriel Mountains. Old Nadeau Road, which parallels Pearblossom Highway near the Vincent Hills at the southern end of Palmdale, is apparently a remnant of this original freight-line route, which proved so instrumental in the growth of Los Angeles as the economic center of southern California.

Shortly after the establishment of the first permanent school in the region, in 1869 at Elizabeth Lake, a number of settlers' colonies sprang-up within the valley, including Wicks, Manzana, Chicago, Kingsbury, John Brown, Old Palmdale, Almondale and Llano (Settle 1963). However, the major impetus to settlement resulted with the completion of the Southern Pacific railway through the valley in 1876. One immediate result of the rail line was the establishment of the town of Mojave in this same year. The coming of the rails also fostered the establishment of towns such as Rosamond, Lancaster and Palmdale, which appeared by 1882.

The Southern Pacific Railroad arrived in Mojave on August 8, 1876. The location of the current depot, on the west side of Highway 14, was the location of the original depot site, although the existing depot building is a later construction. A freight depot was added on August 20 of the same year and, before long, the town turned into a division point for the rail

line. With the railhead at Mojave, the San Bernardino Borax Company began hauling its borax to the town on mule teams; the Baldheaded Eagle Borax Company began using the town as its railhead a few years later, in 1881. The Santa Fe Railroad arrived in 1884, as did the famous "20 Mule Teams" of the Pacific Borax Company, truly making the town a transportation hub for the region. The Pacific Borax Company continued with its mule team loads to the railhead until 1889, when a spur line reached their mining operations (Deaver 1967).

The original town site of Mojave was lay-out by the Southern Pacific at the time that the rail went through. Initially it was simply a residential camp for railroad employees consisting of a few wooden shacks, but it was of sufficient importance that a post office was opened in October, 1876. Because of its position as a transportation hub, Mojave quickly attracted additional residents but was not filed as a subdivision until 1905 (ibid). Growth at and after that point was spurred by two early twentieth century developments. The first was the increasingly important mining activities at Standard Hill and Soledad Mountain, south of town. The second was the construction of the Los Angeles Aqueduct, built between 1907 and 1913, which brought literally thousands of workers into the region. In addition to its function as a transport hub, Mojave served as the "watering hole" for the mine and aqueduct crews, and was widely renowned for its saloons and brothels, which were said to outnumber the churches in town by 10 to one.

The historical importance of the Golden Queen study area, of course, primarily concerns the mining history of the Mojave Desert. This has been summarized in period and more recent publications, with Brown (1915),

Clark (1970), Hensher and Vredenburg (1991), Miller and Miller (1976), Settle (1963, 1967), Settle and Settle (1984) Troxel and Morton (1962), Tucker (1923, 1935), Tucker and Sampson (1933), and Tucker, Sampson and Oareshott (1949) constituting the primary sources. The history of this area has been synthesized from these and other sources.

The first recorded mining activity in the region occurred on March 8, 1894, when W.W. Bowers found gold on a promontory south of Mojave, then known as Little Buttes (subsequently changed to Bower's Hill and now Standard Hill). His first claim was the famous Exposed Treasure mine, which he brought into operation shortly thereafter, shipping ore worth \$60/ton. By 1896 a camp had sprung up around this site (Hensher and Vredenburg 1991). The Exposed Treasure discovery apparently spurred local interest in prospecting as, later in 1894, Ezra M. Hamilton discovered gold in the Rosamond Hills, to the south, at a location that would eventually become known as Tropico (Settle 1963, 1967).

Mining activities within the Golden Queen study area were apparently stimulated by the Exposed Treasure discovery, and can be divided generally into three periods. The first, stretching from 1894 to about 1910, was an era of prospecting and the development of a series of early properties and mills (Tucker 1935). The three primary mines in operation during this period were the Karma, Queen Esther and Echo, each of which had their own mills, with lesser amounts of mining at the Eagle Group and Bobtail claims, both of which fall outside of the current study area, and neither of which had mills during this period. Activity was minimal from about 1922 to the start of the Depression when, like many mining regions in the west, numerous small scale mining efforts were started. According

to Tucker (speaking of the Mojave mining district as a whole, which included the Tropico area 17 miles to the south and Standard Hill to the north), about 50 to 70 leasers worked old mines from 1931 to 1934, hauling their ore to the Tropico for milling (Tucker 1935). Activity accelerated dramatically during the mid-1930s on Soledad Mountain, however, when the Mojave Mining District was revived by the discovery of the Silver Queen vein, leading subsequently to the establishment of the Golden Queen mine and mill. This represented the second primary period of mining within the study area, with the Golden Queen building a major cyanide plant, and consolidating a number of the earlier claims and patents. Depression era mining terminated in 1942 with the official closure of all gold mines by the War Production Board. The final period of activity has occurred in recent years, during which time a limited amount of mining has been conducted on different claims on Soledad Mountain.

Queen Esther

The Queen Esther mine and mill appear to represent the first mining activity on Soledad Mountain, with Troxel and Morton (1962) claiming that the mine was first discovered in 1894; like all properties within the study area, however, existing documents at the Kern County Hall of Records only begin about 1900, so the initial date of the claim is unknown.

What is certain is that the mine was originally called the Thomson and Boyle, for its first owners Henry D. Thomson and J.L. Boyle, but its name was relatively quickly changed to the Queen Esther. A partner with Thomson and Boyle in the mine and mill was Harvey S. Mudd, of the Pomona colleges fame, who most likely was the partner who funded the

mill construction.

Initial work at the mine, which is located on the north face of Soledad Mountain, yielded small tonnages of high grade shipping ore. A 1901 account in the Mining and Science Press (2/2/01) states that ore ran at \$180/ton. In 1903 a mill was constructed on site. According to a period account in this same weekly (Mining and Science Press 4/11/03), a 100 ton roller mill was put in, apparently with a cyanide plant. This was increased to 150 tons in 1904 (Troxel and Morton 1962), but not without difficulties: Mining and Science Press reported on 11/14/03 that "The Queen Esther mill at Mojave is shut down on account of the breaking of some machinery."

A (somewhat florid) period account of the Queen Esther mill in operation was published by Margaret Troili in the Overland Monthly in 1908. She stated:

[H]ere on the steep slope the big mills shook as they devoured the gold ore. Cottages of lumber and stone trailed down the slope; some sat squarely on the level, but the mills lorded over it all. Inside the mill, the shaking seizes one, and a cloak of dust whirls around and refuses to settle. In the engine room, vast power is created, vast work is done. It makes me wonder at man - the big wheels whirling, nice parts doing their work with precise regularity, tremendous beltings rushing up through the timbers and making a great roar and tumult up there, rushing down again like a demon, seizing the great wheels for a frolic, and oozing upward like a never-ending brown genius from a little bottle.

Troili's references to the cottages and the mills in plural concern a nearby residential area and the adjacent Karma mill, respectively, which are discussed subsequently.

Period photographs of the exterior and interior of the Queen Esther, taken by John A. Gerner around 1904, are included as Figures 2a and 2b. Note the fact that the Queen Esther mill was set-up so that its cyanidation vats were alongside, rather than downslope from, the roller mill structure. Mrs Meehl (personal communication, 1995) also recalled that a barn, for draft animals, and boarding house for miners, were located above the mill, though these are not clearly shown in the photos.

The Queen Esther was shut down in 1910, by which time 286 tons of ore had been mined. No accurate production figures for the mine exist, though it is estimated to have produced millions of dollars worth of gold (Troxel and Morton 1962). The Queen Esther was consolidated with the Golden Queen mine in 1935, with its veins apparently worked and perhaps some of its tailings rerun at the Golden Queen mill. The original Golden Queen mill, however, was apparently never used after 1910, and was probably dismantled some time after it closed.

Karma Mine

The Karma mine, due east of the Queen Esther, was apparently also first discovered in 1896 and was quickly put into operation, with ore averaging 7 ounces of silver/ton alone during the first seven years of its production (Troxel and Morton 1962). By 1899 a large boarding house and bunk

house had been built for mine employees, "and cabins sprouted like wildflowers along the slopes" (Hensher and Vredenburg 1991:55) below the mine. According to Mrs. Grace Wegmen Meehl (personal communication, 1995), the Karma Mining Company spared no expense in housing its employees, and built a number of well-made wooden buildings for their use, some of which are still standing.

The mine was owned by the Karma Mining Company until 1918, but this company itself changed hands a number of times during the early years. One of the more notable owners of the Karma, from the perspective of historical records and documents, was John A. Gerner, who served as President and Superintendent around 1904. While so employed, he documented the Karma, Queen Esther and Echo mills photographically, the results of which (in the Larry Vredenburg photo collection) have greatly aided our interpretation of the archaeology of the study area, and are included here relative to a number of archaeological features. The Gerner residence, or superintendent's house for the Karma mine (Figure 3), along with a boarding house, was at some point moved to Tropico, and is still standing there. According to Mrs. Meehl, the superintendent's was originally located east of the Wegmen residence, near the boundary with Section 5.

According to period accounts of the Karma published in the Mining and Science Press (2/2/01), by early 1901 "the shaft is down 280 feet. Four hundred feet of drifting is completed". Due to increasing lower yielding ore, construction of a mill was begun in 1903 but, like most such undertakings, things did not go as smoothly as optimistically predicted. Again, the Mining and Science Press tells us on August 29, 1903, that the

"Machinery for the Karma mill, near Mojave, is on the ground and building will begin Sept. 1. More men will be put into the mine". Almost two months later (10/17/03), the same source stated: "The Karma M[ine] Co. at Mojave has bought a second-hand 10-stamp mill and will add to it 10-stamps more. J. Gerner is president and superintendent". And one month later (11/14/03) Mining and Science Press reported that "J. Gerner, superintendent of the Karma M. Co., says the mill will be in operation this month". Other records indicate that the 20-stamp mill was finally in operation sometime in 1904. This was effective until 1909, when the mine and mill were shut-down due to poor recovery (Troxell and Morton 1962). The mill was apparently never reopened, and the stamps and stamp boxes are still on site (see below).

Figures 4a and 4b show the Karma Mill shortly after construction. A notable feature of the mill was the long and high trestle that connected the mill structure with the haulage level adit and vertical shaft. According to Mrs. Meehl, this trestle was used in the filming of a number of movies, including one starring Charlie Chaplin in 1926, and another featuring Gene Tunney. Figure 5a shows the head frame and hoist house of the Karma mine in 1904, which are still standing. The head frame sits over a vertical shaft; the corner of the hoist house shown in this picture has been altered to accommodate the turning radius of a narrow gauge rail line running from the haulage level adit to the trestle. Figure 5b was taken when the stamp batteries were being installed in the mill. As can be seen from this photo, although these concrete batteries are massive, they were not poured on-site, but instead were apparently brought in, ready-made.

The mine was reactivated following World War I when the US Smelting and Mining Company at Kennett agreed to purchase low grade ore with

high silica content. As is clear, the mill itself was not reactivated. Ore shipped from the Karma to Kennett between 1917 and 1926 averaged between 5 and 9 ounces of silver/ton (Troxell and Morton 1962). The mill building of the Karma Mine was still standing until 1947, when a fire was accidentally started by visiting teen-agers, which burned it down (Mrs. Meehl, personal communication, 1995).

In 1926 the Karma was purchased by E.L. Wegmen, becoming part of the Wegmen Group (consisting of the Karma, Eureka and Grace Groups). Engelbert (Bert) Louis Wegmen was born on February 10, 1873, in Oedding, Germany, and moved to the U.S. with his family when he was seven years old. Due to a case of malaria, he moved out west as an adult, arriving in the Mojave area on November 11, 1903. Having worked with steam engines back east, he was hired to work in the steam plant at the Karma mill. Initially the lack of housing on the hill forced him to live in a lean-to attached to the superintendent's house (Mrs. Grace Wegmen Meehl, personal communication, 1995). But with small cabins appearing on the north slope of Soledad Mountain, built by the company and providing homes for men with families, he was able to send for his wife and two children, who arrived on May 25, 1904. Subsequently, he and his wife had three more children, all of whom were born on Soledad Mountain, including Grace Eleanor Wegmen Meehl. In addition to his work at the mill, Wegmen was apparently active in the development of a school at Soledad City, serving as the clerk of the school board for many years (ibid; Settle and Settle 1984; see below).

Exposure to the Karma mill apparently strongly motivated Wegmen to pursue mining, as it subsequently became his career. When the Karma

mill shut down in 1909, Wegmen stayed on as a guardian, according to the his statement of occupation in the 1910 census (see Table 1). Thereafter he continued his own mining pursuits, eventually becoming involved with the Exposed Treasure Mine, on Standard Hill, and the Randsburg mines, where he served as superintendent (Settle and Settle 1984). In the 1920s and 1930s, however, he used the assay office of the Karma Mine (located near the hoist house) to run samples from Randsburg (Mrs. Meehl, personal communication, 1995). He maintained his residence within the study area throughout his life, however, with his wife living at the Wegmen home into the 1950s, and other family members occupying the homestead into the 1990s.

Following the acquisition of the Karma mine and mill, Wegmen began mining operations. In 1933, he patented the Karma property (Kern County Hall of Records M.S. #6140), thereby strengthening his claim to the property. According to Settle and Settle, however, the processing of the ore was conducted off site: "Ore was sledged down the hillsides to ore-bins from which bulk and sacked ore was shipped by gondola car-loads to smelters" (1984:91), with the ore shipped to the Golden Queen mill, one-half mile west from 1937 to 1941. In 1951 a new small vein was discovered. From the 27 tons of ore extracted from this operation, 10 ounces of gold, seven ounces of silver, 251 pounds of lead and 40 pounds of copper were extracted. This played out relatively quickly so that, by 1958, the only mining activity at the site was a two man cross-cutting operation (Troxel and Morton 1962). Clark (1970) estimated that the Wegmen Group as a whole produced around \$100,000 in total during the life of its operation.

Echo Mine

The Echo mine and mill, located on the northwestern side of Soledad Mountain, was first discovered during the 1890s, and was worked until about 1905 by the Echo Mining Company, producing about \$200,000 in ore (Troxel and Morton 1962). As with the Queen Esther and Karma, a stamp mill was constructed at the Echo in 1903, a process that apparently went fairly smoothly, judging from period accounts. According to the Mining and Science Press of March 7, 1903, "The 10-stamp mill building at the Echo Mine, 5 miles from Mojave, will be completed by March 10. Development of the mine is in progress". One month later, the same source reported that "The 10-stamp mill of the Echo Mine Company of Los Angeles, Cal, 5 miles west of the village of Mojave, is running steadily on good ore. A cyanide plant is being built to work the tailings direct, there being no intermediate concentration, all the ore being oxidized" (Mining and Science Press, 4/11/03). Later in the year the Mining and Science Press stated that "The Echo M. Co. at Mojave propose to add a centrifugal or rotary mill to its 10-stamp mill. Superintendent J. Keith reports opening a rich shoot in the mine carrying horn silver and black sulfide of silver. G.H. Hooper is president and manager" (10/17/03). Finally, of November 3, 1903, the Mining and Science Press reported that "J. Frank Walters, of Los Angeles, has bought the Echo Mine at Mojave, and will soon resume working the mine and the mill with A.M. Peck as superintendent. The Bobtail mine has been purchased by the same company. The new group consists of 17 claims and has a 20-stamp mill and cyanide plant".

The implications of the above reports seem to be that the Echo mine and mill was operating quite smoothly, with consideration being given to

expansion. In less than a one month period, however, the mine and mill apparently shut down, and were purchased by a new outfit, with the mill doubled in capacity during this same period. Records at the Kern County Hall of Records indicate, in fact, that the mine experienced 11 deed changes between 1902 and 1906, suggesting that purchase and resale were a common process at the Echo.

According to Troxel and Morton (1962), the mine closed around 1905, with the mill dismantled in 1906. Carroll Allen is listed as owner from 1906 to November, 1910, at which time it was purchased by George McBryant, who was listed as a mine watchman in the 1910 census (see Table 1). McBryant apparently lost the mine for unpaid property taxes the next year (Kern County Hall of Records Tax Deed #256-8).

The Echo mine was idle except for minor activity until 1935 when, with the discovery of the Silver Queen, the Mojave Mining District was revitalized. Subsequently, it was incorporated into the Golden Queen Group (Troxel and Morton 1962).

A 1903 photograph, taken by Marion Auberry, shows the Echo Mill and related wooden structures during its operation (Figure 6). As is immediately apparent, this mill operation was much more modest in size than that at either the Karma or Queen Esther. This inference is confirmed by other photos of the Echo Mill, also taken circa 1903 - 1904 (Figures 7a and 7b), including one by John A. Gerner. Photos by Gerner of the interior workings of the mill (Figures 8a, 8b, 9a and 9b) provide an indication of the machine works, and lay-out of the zinc tanks, at this facility.

Golden Queen

The Golden Queen mine has its origin in 1933, when George Holmes discovered the Silver Queen vein, high on the north slope of Soledad Mountain. This discovery revitalized the Mojave Mining District generally, with approximately \$300,000 removed from the mine between 1933 and 1935. In this later year, Holmes and his partners sold their mining interests to the Gold Fields American Development Company, a subsidiary of the English company Gold Fields of South Africa Mining Corporation, for the sum of \$3.5 million. The resulting Golden Queen Mining Company represented a consolidation of a series of groups on Soledad Mountain, including the Silver Queen, Queen Esther, Echo, Gray Eagle and Soledad Extension properties (Tucker 1935; Troxell and Morton 1962). A state of the art mill and cyanide plant was also built in 1935, starting in operation in October of that year.

According to a period account (Tucker 1935), the main haulage tunnel at the Golden Queen held 30 pound rails supporting 12 Westinghouse Electric two-ton locomotives and cars. Mine equipment included three Imperial-type Ingersoll-Rand compressors, a blacksmith shop and a machine shop. The mill and cyanide plant ran 24 hours per day with a 350 tons/day capacity. It had 700 tons coarse ore bins, primary and secondary gyratory crushers, Marcy ball mills, Dorr classifiers, and then a series of Dorr agitator and thickener tanks, with Oliver drum filters at the end to dewater the slimes (ibid:478). Two hundred men were employed at that time: 150 on construction, and 50 on mine development. A California Division of Mines and Geology picture of the mill in 1935 is included here as Figure 10.

By mid-1937, it is estimated that the mine was producing 300 tons of ore per day. Between 1936 and 1942, approximately one half-million tons of ore were processed, yielding \$6 million in gold and silver. Increased mining costs after the war prevented its reopening, and the mill was dismantled in about 1950, and it burned sometime subsequently. However, minor activity continued into the 1950s, and the total production for the mine has been estimated at about \$10 million (Troxel and Morton 1962).

This figure has been grossly confirmed through the acquisition of copies of the original accounting ledger sheets for the mine and mill. Based on records for 64 months dating between early 1936 and June 1941 (i.e., for less than the total period of production), the actual receipts for gold bullion sold by the Golden Queen Mining Company totaled \$7,867,782, thereby averaging about \$123,000/month. However, these records indicate that the mill was processing and purchasing a considerable amount of ore from other mines during this period (including, according to Mrs. Meehl, from the Wegmen mines). Custom milling apparently accounted for \$2,200,736 of the Golden Queen's bullion sales, representing fully 29% of the total for the 64 months. Where all of this ore originated is unknown, especially given that the Elephant-Eagle Mill was also operating on Soledad Mountain at this same time.

"Soledad City"

In addition to the mines and mill, per se, the historical records also indicate the development of a residential settlement on Soledad Mountain, which has been referred to above. In two documents (one historical and one recent) this is referred to as "Soledad City". However, it needs be

noted that Mrs. Grace Wegmen Meehl, who was born, raised and lived on the Wegmen property for most of her life, had never heard the term "Soledad City" used while she lived there (personal communication, 1995), so this is apparently a slight misnomer. Regardless of toponym, this residential area is described very briefly in a few reports as consisting of a series of wood and stone cabins on the side of the mountain which first started to develop around the Karma mine in about 1899 (e.g., Troili 1908; Settle and Settle 1984; Hensher and Vredenburg 1991). An oral history of the Wegmen family also indicates that it included a school; apparently, the local population of children was sufficient to keep this school open until just a few years before the opening of the Golden Queen mine in the mid-1930s. According to Mrs. Meehl (personal communication, 1995), who went through the tenth grade at this school, it was originally located near the Queen Esther Mill, but was moved downslope around 1910 to a building on the north side of Silver Queen Road, north of the study area, which was recently bulldozed. Attendance averaged about 15 students in this one-room school, although it had been as high as approximately 25 when the mines were in operation. In order to keep the attendance up, and therefore continue to qualify for state funding, children were also brought in from Vreda, the nearby rail siding near the intersection of what are now Silver Queen Road and Highway 14. Furthermore, Mr. Engelbert Wegmen, who was on the school board, always insured that the teacher hired for the school herself had a family of children to boost enrollment.

The most significant documentation of this residential district is the U.S. Census of 1910. Due to extremely good luck, the census taker for the township of Mojave happened to write the camp or locale of the inhabitants he was recording in the left margin of the census. Included are

about four pages of entries annotated "Soledad and Queen Esther". These have been transcribed in Table 1.

According to the census, the total population of Soledad in 1910 was 95 individuals, the majority of which were unmarried males, but also including a significant number of women and children. Note that this total represents the period after the closing of the Karma and Echo mines, at a minimum, therefore it probably does not represent the local population peak, which presumably would have occurred around 1904 - 1905; according to Mrs. Meehl (personal communication, 1995), family tradition maintained that the population was as high as 200 people at the peak of mining activities around 1905, which seems entirely plausible, given the 1910 census figures. Subsequently, the population dropped dramatically, with very few people living here in the 1920s and 1930s; sometimes it was limited to only two or three family groups homesteading on the mountainside.

The majority of the adult males, not too surprisingly, list their occupations as "quartz miners". A series of other occupations - almost all mining related - are also represented, including waitress and housekeeper, presumably at the boarding house and dining hall for the unmarried miners. As regards ethnicity, a significant number of the miners originated in Slovenia, eastern Europe. Probably reflecting the local mining slang of the time, almost all of the Slovenian miners are listed as having the first name of "Mike". Another significant ethnic group represented are Italians. According to Mrs. Meehl (personal communication, 1995), the residential area centered in a series of cobble structures downslope from the Queen Esther Mill was known as "Little Italy", in recognition of the

ethnicity of the inhabitants of this area. Although greater written documentation would be helpful, the census nonetheless indicates a considerable amount concerning the size, socioeconomic breakdown, and ethnicity of the population associated with the early historical mining within the study area.

Judging from the historical records and Mrs. Meehl's recollections, the residential area on the mountainside can be divided into two areas: on the northeastern side of the study area there were a series of wood frame cabins and structures built by the Karma Mining Company; this area eventually became the Wegmen homestead. Towards the west, and essentially north and west of the Queen Esther Mill, was "Little Italy", the cobble structures built by the miners working for the Queen Esther Mine. These self-made structures reflected the Queen Esther corporate policy of "extreme frugality". Figures 11a and 11b show the structures making up these residential areas, albeit from a distance. What is clear from these photos, however, is the sequence of construction or development of these various structures. Initial construction of wooden buildings clearly occurred on the northeastern side of the study area, along the N-S Sections 5 and 6 boundary, as shown in Figure 11a. Approximately ten wooden buildings were constructed in this area, which is east of a low rocky ridge that is, itself, immediately east of the Wegmen house and homestead area. These appear to front the dirt road that runs along the section boundary, and apparently was the road into the Karma and Queen Esther. These mills are both shown in the photo, which is a California Division of Mines and Geology print, probably taken by Auberry in October, 1903. (Since the mills were built in 1903, this photo cannot be earlier than 1903, although the wooden structures themselves certainly could pre-date the mills).

Figure 11b, a Gerner photo of approximately the same vista, shows a somewhat changed landscape taken about 1904. A row of five wooden houses or cabins has been built below the Karma mill; one of these was eventually remodeled into the Wegmen house. There are also a series of indistinct but still clearly present structures in the area of "Little Italy", below the Queen Esther. Although the antiquity of these different habitation areas may only vary by a few months, these two photos nonetheless demonstrate that the oldest habitation area on the mountain is on the northeastern side of the study area, and that the wooden row houses and "Little Italy" housing area post-date this initial settlement by at least a few months, if not about a year.

2.0

ARCHIVAL RECORDS SEARCH

The background research for the Golden Queen inventory required two kinds of archival research. First, in order to develop an adequate understanding of the documented history of the study area, published and unpublished maps, documents and records were examined at the Kern County Recorder's Office, the UCLA Earth and Space Sciences Library, and the BLM offices in Bakersfield and Ridgecrest. These sources provided data in the form of mineral claim, sales and patent documents on the property, period newspaper articles on mining activities at these mines and in the region generally and, through the assistance of Larry Vredenburg, the Gerner photo collection of the property, which consists of a series of black and white pictures of the mines and residential areas taken about 1904 (discussed above). The information taken from these sources has been summarized in the historical background presented above. The second type of archival review concerns a study of the archaeological site records, maps and files housed at the California Archaeological Inventory, Southern San Joaquin Valley Archaeological Information Center (AIC), at California State University, Bakersfield.

An archaeological records search was conducted by AIC staff to determine whether the study area had been previously surveyed by archaeologists, and whether any archaeological sites had been previously recorded on it. The complete results of this records search are included as Appendix A to this report.

Based on AIC files, the Golden Queen study area had never been systematically surveyed by archaeologists in its entirety, and no sites had been recorded on it, although two sites had been recorded on adjacent public lands within Section 6. Thus, it was apparent that an intensive Phase I survey was required for this property, especially given the documented history of mining activities summarized above.

3.0

FIELD METHODS

3.1 Field Methods

Field methods employed during the Phase I survey of the approximately 600 acres Golden Queen study area were designed to obtain complete (100%) survey coverage of the study area. They included intensive, on-foot examination of the groundsurface of the study area; the identification and location of discovered sites; tabulation and recording of surface diagnostic artifacts; site mapping, using Brunton compass, surveyor's tape and a Magellan Pathfinder GPS; preliminary evaluation of site integrity; site recording, using established procedures and forms (see Office of Historic Preservation 1986); and the photographic recording of a selection of the sites. No collection of archaeological remains was made during the Phase I survey.

Because the study area contains considerable topographic variability, different surveying strategies were employed during the inventory. In the areas of flat terrain to moderate slopes (typically on the northern side of the study area), the groundsurface was examined with the crew spaced at approximate 15 - 20 meter intervals, walking transects across the study area to identify artifacts or other archaeological indicators that might be present on the groundsurface. Ridge lines were covered in a similar manner. Steep slopes (generally exceeding the angle of repose), which comprised a large portion of the central section of the study area, were covered by crew-members walking zigzag transects that traversed the

slope faces.

In all cases, special attention was paid to depositional environments, such as saddles, swales and toe slopes, where the likelihood of archaeological preservation is enhanced. Further, rock faces, amenable for the creation of rock art or providing locales for rhyolite quarries, and rock shelters, usable for prehistoric habitation, were carefully examined as high likelihood spots for the presence of prehistoric archaeological remains.

3.2 Field Conditions

Field conditions for the Phase I survey of the Golden Queen study area were, in general, good as regards groundsurface visibility and therefore the ease of site recognition. Vegetative cover varied from moderate to sparse, in areas of flat to moderate slope, to non-existent, on cliff faces, bedrock outcrops and scree slopes, with only a few exceptions (these exceptions have been noted on the site descriptions provided below). Furthermore, archaeological sites within the study area tended to include large quantities of structural remains, which were themselves easy to recognize, and the sites tended to cover relatively large areas, further facilitating site recognition. On the other hand, the extreme slope of portions of the study area made surveying difficult, if not outright dangerous, in some areas.

4.0

SURVEY RESULTS

4.1 Introduction

The field survey of the Golden Queen study area resulted in the discovery and recording of a series of new site localities. All of these are historical (Euro-American) in age and are a product of the mining history of the property. We discuss these sites in turn below; site records and updates are provided in Appendix B of this report.

4.2 Newly Discovered Sites

As was expected, given the mining history of the study area documented above, a series of historical sites were discovered and recorded during the 1995 field survey. These fall within three general categories of sites, with some sites comprising a combination of the types: turn-of-the-century/early 20th century mining facilities (mill complexes, head-frames, ore chutes, adits, prospects and other features); Depression era mining facilities; and residential debris (structures, dumps, privies and related remains). Because of the complexity of these remains (in terms of history of ownership and period[s] of use), we have grouped them into clerical "sites", which are based primarily on geographical clustering. That is, at this point in our understanding of these historical cultural resources, these "sites" should not be taken to necessarily represent functionally related units (though in some cases they clearly were) so much as historical

features and remains in close locational proximity. We describe these sites below; site locations are provided in Figure 12.

4.21 Cobble City (CA-KER-4446H)

A historical town or hamlet (mentioned in the historical documents discussed previously) is located on the northern flank of Soledad Mountain, immediately downslope of the Queen Esther mine (Figure 12); indeed, downslope movement of the tailings from the Queen Esther mill is encroaching on, and (according to Mrs. Meehl) has already covered, portions of this site. This apparently represents the residential area which was referred to as "Little Italy", according to Mrs. Meehl (personal communication, 1995), due to the ethnicity of its inhabitants. We have referred to it simply as "Cobble city", reflecting the nature of the structural remains at this locale.

Extant remains of Cobble City extend from the mill tailings downslope approximately to the northern border of Section 6, a distance of about 430 m N-S, with an E-W dimension of roughly 250 m. This represents 107,500 square meters. It is important to emphasize, however, that the density of historical archaeological remains within this very large area varies considerably, and is certainly not continuous. As a general rule, the nature of the site density may be characterized as consisting of a series of relatively discrete, dense concentrations of artifacts and structural features, with very little or no remains in-between. Furthermore, the density of remains is greatest on the southern (up slope) end of the site, diminishing considerably towards the north, as well as to the east and west

from the core of the settlement. Figure 13 presents a schematic lay-out of the features on the site.

Features found in Cobble City are summarized in Table 2. Our preliminary tally recorded the remains of 18 buildings or buildings complexes, representing minimally 34 separate rooms or buildings on the site (in some cases building complexes consisted of multi-room structures; in others, separate buildings with abutting walls); four leveled pads; one cobble-edged walkway; five dumps; five privies; two vertical shafts; one water tank facility; and a water line.

Typically, the buildings on the site were either masonry, made of uncut or unfaced fieldstone cobbles that are mortared with adobe, or unmortared cobble foundations that supported wood frame structures. None of the wood frame structures are currently still present at the site, and only a few remnants of timbers are present at most of them. Cobble walls of the masonry structures range in height from eight feet (fully preserved gable wall) to a foot or less (wall remnants). Some of the walls are plastered with an adobe coating and whitewash; a few walls are plastered with what appears to be a coating of concrete or cement. None of the masonry buildings retain their roofs, although roof remnants (timber and sheet metal) are still present, littering the ground surface, in a few cases. Furthermore, one of the structures has walls that are completely preserved, indicating that the building was gable-fronted. Many of them may have been similarly constructed; although the majority of the structural remains for the masonry structures that are currently standing are only a few feet tall.

Internal structural features for these masonry buildings are minimal, although the fact that most of the walls are only a few feet high (and thus below the level of windows and shelving), makes any generalization about relative frequency meaningless. Some have window openings, a few of which are framed with wood; a few also have built-in shelving made from packing crates set-in to the stone walls. But perhaps more importantly, the constructional features of these cobble structures indicate primary reliance on locally available building materials (field cobbles and adobe mortar), paired against the use of recycled materials (packing crates for built-in shelving; flattened tin cans for roofing shingles). In a few cases, "store-bought" construction materials were also employed, notably in the use of corrugated tin roofing, but this seems to have been the exception rather than the rule. The less common wood frame structures, of course, were made with milled lumber and thus represented entirely "store-bought" building materials.

Both types of buildings are assumed, at this point, to have served as residences, an inference based on historical accounts, and substantiated by the residential debris found around many of the structures. Some of them contain in-situ artifacts (e.g., a wood burning stove, barrels); others have had their floors buried by downslope colluvium and may contain artifacts on their groundsurface. A few of the structures also appear to have been burned, based on the presence of charred wood (presumably, roof timbers) and melted glass in and around them. Notably, the burnt structures tend to be concentrated towards the northern (downslope) end of the site.

Artifacts associated with the structures (and with other features at the site; see below) fall temporally within two categories: the majority appear

to be early 20th century in age, indicating that the primary occupation of the site fell roughly between 1900 and 1920 with, we believe most of it before World War I; a few of the structures contain Depression era or later remains. Based on similarity in construction techniques, we assume that the Depression era and later remains reflect the use of some of the structures beyond the period of construction and primary occupation. Notably, the Depression era and later remains concentrate in three of the better preserved masonry structures located at the southeastern or downslope end of the site, thus closest to the Silver Queen Road. The majority of the structures (masonry and wood frame), however, appear to have been purely early 20th century in occupation.

In addition to the structural remains, four leveled pads were also identified. One of these (Feature #19) is quite large (roughly 11 x 9 m in size) and, judging from timber remnants, probably also once contained a wood-frame structure. Presumably it had a wood pier foundation, rather than cobble foundation, like the majority of the other wood buildings on site. Three metal overall buttons were found on the groundsurface of this pad; they are marked with two different "Car Hearts" brand logos. Another Car Hearts button was found at the Queen Esther mill site (see below), suggesting a chronological tie between this feature in Cobble City and the mill (as also indicated by historical accounts). Two privies (Feature #27) are located adjacent to this pad, at the northeast and southeast corners, respectively. One of these privies still has a small portion of the framing of its southern wall standing; otherwise, they have been identified (as with other privies within the study area) by the presence of a square depression exhibiting differential vegetative vigor, surrounded by a single coarse of field cobbles, and containing a few surface artifacts. Given the

large size, evidence of a wood frame structure, and presence of two privies, we assume that this pad represents either a boarding house or dining hall (since historical documents indicate both were present on the site).

Notably, no kitchen midden or dump is associated with Feature #19, which would support its interpretation as a dining hall, but in general dumps are relatively rare on the site. That is, we failed to find a dump of any consequential size at the site, although five smaller dumps were recorded. The absence of a dump commensurate with the size of the settlement as a whole may be due to any of a series of factors. First, many of the structures are relatively dispersed, thereby diminishing the logic of a single, concentrated town dump. The dumps that were recorded, in fact, appear to be small trash piles associated with one or a few dispersed structures. Second, the site sits on a relatively steeply sloping hillside, indicating that downslope movement of materials is likely; thus, in-situ preservation of single artifacts is unlikely. Again, at least one of the identified dumps has clearly spread downslope for a considerable distance, and garbage on the site is generally spread out, rather than concentrated, for this same reason. Third, and similarly, if the dump were placed in the moderate sized arroyo on the eastern side of the site it would have eroded away; alternatively, if it were located on the western side of the site it might now be covered by the downslope movement of the Queen Esther tailings. The most intact dump on the site, in fact, is located on the edge of the arroyo; this may be all that is left of the main town dump. Fourth, there are two vertical shafts in the general vicinity of the town. Currently we do not know if these are contemporaneous with the primary occupation of the site, but if they were and were abandoned during the town occupation, they may have served as dumps themselves.

Four of the dumps date entirely or primarily to the early 20th century. A fifth dump (Feature #29), in contrast, appears to be essentially modern or recent (post-World War II). It is located at the southern end of the site, relatively close to the Wegmen ranch, and consists of a large hole that has been filled with debris (modern cans, old appliances, etc.). Although under normal circumstances this feature would not qualify as archaeological in nature, there is a small concentration of early 20th century remains present immediately surrounding this modern dump, suggesting that an earlier trash pit was reused more recently; that the modern trash pit disturbed an earlier site component; and/or that an early dug-out structure was filled with modern trash.

As implied above, a series of five privies were found on the site. Given the number of structures present, we suspect that more are present and that they have either been buried by colluvial movement or that they may be discovered with more intensive studies. Evidence of early 20th century artifacts was found around each privy; typically hole-in-top tin cans and broken bottle glass.

The final category of features at the site are the water works. This consisted of two large water tanks (Feature #24); an associated collapsed wood structure (presumably, a pump house); and a 2" iron water line (#34), which we infer runs from the tanks to the Queen Esther mill (the line is buried by the mill tailings along its upper stretch, so its final termination could not be determined). The water tanks included an iron, hand-riveted tank that is probably early 20th century in age, and a more recent galvanized tank (which is now in poorer condition than the hand-

riveted iron tank). Presumably, this represents the water system for the mill and the settlement.

Artifacts found on the site included large quantities of tin cans, the majority of which were hole-in-top or, more properly, "vent hole" cans. Sanitary seal cans, which were actually introduced at the turn of the century but did not immediately replace hole in top cans (see Rock 1987), are less common; most of this type were found towards the southern end of the site, associated with the structures that were occupied at least into the Depression era. Can varieties included the range of cylindrical fruit and vegetable cans, oval 'sardine' cans, rectangular tapered meat tins, internal friction-closing carbide powder cans, tobacco cans and large kerosene or oil cans. Glass, particularly bottle glass, was also present in large quantities. It included amber, clear, green and "amethyst" glass (indicating manufacture before roughly 1920). In general, the glass was very fragmentary. However, a relative large number of bottle bottoms, containing wine or champagne kick-ups, were noted towards the northern end of the site. Limited evidence of hand blown bottles or hand applied lips was found. One amber magnum-sized bottle bottom (with no kick-up) contained the embossed mark "SOUTHERN CAL" over "WINE CO" over "LOS ANGELES". Another amber pint bottle bottom was embossed with "PATD AUG 24" over "2" over "1886"; presumably, this is either an heirloom bottle, or the patent date was retained for a lengthy time on the bottle mold, as this date appears to predate the occupation of the site by about two decades.

Ceramic tableware was also highly fragmentary and relatively rare. Only

three maker's marks were discovered, all of which were on whiteware. The first is a printed "K.T. & K" over a line over "S----V" over a line over "CHINA". This is a Knowles, Tayler and Knowles, Company, of East Liverpool, Ohio, mark, who made whiteware from 1872 to 1929 (DeBolt 1988:41). Although the exact duplicate of this mark has not been found in the published literature, it is clearly part of a series of very similar marks made after 1905 (see *ibid*:43; Praetzellis et al 1983:47).

The second mark is Dutch in origin, and has not been found in the published literature. It is also printed and consists of "SOCIETE CERAMIQUE" over a griffin over "MUSTRICHT" over "MADE IN HOLLAND". The final printed maker's mark is fragmentary, consisting only of a crown over "C.P. C", with the final "C" terminating in a break in the sherd. It is possible that this mark is either from the Chester Pottery Company of Phoenixville, PA, which made whiteware from 1894 to 1902, or the Chittenango Pottery Company of Chittenango, N.Y., which was in production from 1897 to ca. 1901 (DeBolt 1988:22) both of which used "C.P. Co." as part of their marks. In either case, a turn of the century age is indicated which, given the shelf life of tableware, would be appropriate for a site occupied during the early 20th century.

Other artifacts noted on the site included barrel hoops, wire nails, stove pipes, metal tools (saw blades, pick tips), narrow gauge rail spikes, metal stoves and stove parts, metal bed and cot-frames, pearl buttons, shoe leather, enamel ware pots, wash tubs and assaying crucibles. These included a 20 gm earthenware crucible with a base stamp of "BATTERSEA WORKS" over "20 Grms." over "ENGLAND". Identical assay crucibles were found in the assay offices of the Queen Esther and Karma mills, further

linking the occupation of these sites.

In general, Cobble City is in a good state of preservation and is relatively intact from the point of view of archaeological remains. That is, it appears to have suffered relatively little from vandalism and looting (e.g., no bottle collectors' holes were noted on the site), and the archaeological deposits and features are largely intact. On the other hand, from the perspective of architectural features, it has suffered greatly due to natural erosional processes in that the large majority of the buildings on the site have been reduced to low wall remnants or cobble foundations in less than 100 years. Furthermore, the rapid downslope movement of the Queen Esther tailings is endangering the site: portions of the site are already buried by these tailings, which are immediately up slope of the primary concentration of buildings. Clearly the extant buildings will be buried in the future if this downslope erosion continues unabated.

4.22 Wegmen Ranch/Site Complex (CA-KER-4447H)

Another complex of historical structures and features is located in and around the Wegmen property, which forms the northeastern corner of Section 6 (see Figure 12), roughly on the northeastern edge of Soledad Mountain. This is a complicated series of archaeological remains in that it contains features dating to the turn-of-the-century, as well as to the Depression era, and also includes two house complexes that were occupied until about 1991. Thus, it appears to have been intensively used for about 90 years. The features identified within this complex have been summarized in Table 3. Overall, the Wegmen complex extends about 345

m N - S by 245 m E - W, for an area of approximately 84,525 square meters.

This site complex is best conceptualized geographically in terms of three areas (see Figure 14), the middle of which is a low, north-south trending ridge containing historical and modern mining facilities. To the west of this ridge area are a series of houses and ranch outbuildings. Starting at the southern end of this western portion of the site, immediately downslope (north) of the east-west road below the Karma and Queen Esther mills, is a collapsed wooden structure (Feature #16). This consists of a large, unmortared cobble foundation measuring about 15x6 m in size, with a few remnant pieces of milled lumber, indicating that this was a wood frame building foundation. It is shown in a 1904 Gerner photo of the Karma mill, and apparently served as one of the Karma Mine residences. Two privies (Feature #17) are associated with this structure: one located towards the northeast corner; the other about 17 m west of the structure. The privies currently consist only of square depressions surrounded by a single coarse of cobbles. Artifacts associated with these features are limited in number but are early 20th century in age.

A (barely) standing wood frame house (Feature #1) is located slightly southeast of the above features. This is a single story, gable front, board and batten house of three rooms, with a porch probably encircling three sides (the west side of the house has collapsed making precise configuration difficult to determine). The roof of this house, which is also collapsing, is wood shake and tin. The foundation of the house consists of wood piers sitting on an unmortared cobble pad. In general, the architectural style of the house conforms with a ranch-house variant of a

California bungalow. These were commonly constructed from the turn of the century into the 1920s. Again, a 1904 photo of the Karma Mine shows this structure, along with Features #2 and 16, as part of a line of mine residences.

This structure is filled with 11 metal, wood and wire bed frames, while artifacts immediately around and nearby it include Depression era in age. Although the house was built earlier in the century, the last significant occupation of it appears to have occurred sometime during the 1930s (see below), and it seems to have been used as a boarding house, given the large number of beds stored in it. The structure is in very poor condition.

Another example of structural remains, consisting of a collapsed wood-frame building, is located due north of the last house (#1). This structure (#2) represents a building equivalent to Feature #1; that is, a board and batten, wood-frame house, and is depicted in the 1904 photo of the Karma mine.

Note that Features #1, 2, 16 and 17 fall outside of the Wegmen Estate lands, per se, actually lying within the Silver Girl No. 2 ("Karma") property. Features #1, 2 and 16, furthermore, appear to be three structures mapped and designated as houses on the mineral survey of the property by Louis D. Rasor, dated January 26-29, 1933 (U.S. Mineral Survey No. 6140), which is included here as Figure 15. This indicates that they were still standing in 1933.

South of the above structures, and within the Wegmen Estate, per se, are two houses that were occupied until about 1991: the Wegmen house

complex (Feature #14), and the Meehl house complex/ranch (Feature #15). The Wegmen house is a primarily wood-frame structure with wood-siding on the north and east sides, and board and batten construction on the south and west. It is a single story, gabled, three room plus bathroom house, with a stucco addition (serving as a kitchen) connected by a covered breezeway to the west, and a frame addition of a single room on the southeastern corner of the building. A porch is present on the north and east sides, and the foundation is wood pier. Five outbuildings are associated with the house: four made of tin and one made of stucco. The original architecture of the house indicates that it was one of the five structures in the 1904 Karma Mine photo. It was apparently remodeled circa 1920, with a series of architectural additions reflecting the then-popular California bungalow style design (such as elephantine porch columns). However, it has been inhabited into very recent times, with additions of different ages, and artifacts in and surrounding the house are modern in origin.

The Meehl house complex is another single story, wood-frame, gabled house essentially equivalent to the Wegmen house, although clearly more recent in age. Accordingly to Mrs. Meehl, who occupied this house until 1968, it was built in 1939, at the time of her marriage. The house has a tin roof and modern metal-sided porch on its south side. It is associated with a large, extensive complex of ranch outbuildings: chicken coops, animal pens and corrals, a barn made of railroad ties, and a large pig-sty at the southernmost end of the complex (furthest away from the house). Artifacts found within this complex are all essentially modern in age, although occasional examples of earlier materials (primarily Depression era) are also present.

The central portion of the Wegmen site complex is the low N - S trending ridge line area. It can be said to contain three archaeological features. The first (Feature #3) is a standing, wood-frame, shake-roof privy. This is a two room, three-hole structure, with a single coarse of cobbles lining the base of the board sides. The long-drops have fully silted-in, and the structure has been used to store a collection of glass insulators and other pieces of broken glass; that is, it does not appear to have been used for its primary function in some time. Absent the standing wood frame structure, this privy is identical to the archaeological remains of such found at Cobble City, and it appears to date to the early part of the century. It is fully intact.

A second archaeological feature in this middle portion of the site is a moderate-sized but dense dump (Feature #4), which appears to be turn-of-the-century or early 20th century in age, and appears to have been sorted by material. This consists of a large quantity (probably more than a thousand) of tin cans, all of which are hole-in-top, a smaller amount of broken glass, some whiteware ceramics and a few miscellaneous items. The ceramics include two identifiable makers' marks, both of which are printed. The first is "K T & K" over a line over "CHINA", which dates between 1890 and about 1905 (DeBolt 1988:43), and derives from Knowles, Taylor and Knowles of East Liverpool, Ohio. The second has "IRONSTONE CHINA" over the standing lion and unicorn Victorian English crest over "J. & G. MEAKIN." over "HANLEY." over "ENGLAND.". This is from the J. & G Meakin Company of Hanley, Staffordshire, England, which has made whiteware from 1851 to the present. The mark found in Feature #3 is illustrated by Praetzellis et al (1983:102, Figure 14, Mark 184) and has

been found in archaeological contexts as early as 1883 (ibid:57). The specimen from the Wegmen site, therefore, either represents an heirloom piece, or the mark had a considerable span of use (possibly into this century) for the J. & G. Meakin Company.

Immediately to the north and east of this dump is Feature #5. This is a vertical mine shaft, accessed by a trench entering the ridge from the east, and a wooden head frame and winch. Narrow gauge rail lines are in-place within the east-west trench, running out to an ore ramp. A completion of assessment notice on the head frame timbers indicates that this represents the Reymert-Fraction claim, dating the most recent activity to April 30, 1994. That is, this is essentially a modern mining facility, although it may have first been in use somewhat earlier. An open prospect is located immediately northwest of the head frame.

The remaining archaeological features within the property are located east of the ridge, and consist of a series of wood cabins and related remains (see Table 3). These include two collapsing, wood frame cabins (Features #6 and 7) that are early 20th century in age; a collapsed wood structure (Feature #9) that appears to have been used into the Depression era; a dump (Feature #10) associated with this last structure; and other miscellaneous features (including cobble foundations for other wood frame structures). Note that the 1904 Gerner photo shows a series of these wood frame structures standing in this portion of the site. Thus, the construction and initial use of these features was contemporaneous with the early 20th century activities at Soledad Mountain. In general, however, features on this eastern side of the site complex are in very poor condition. In part this may reflect the fact that this portion of the site, lying alongside a

public access road, is most accessible to the public, and thus has probably experienced the greatest visitor pressure.

In summary, the Wegmen site complex is a fairly complicated mixture of time periods and uses. Most but not all of the features within the site are habitation-related, and recent use of the property has of course impacted some of the earlier aspects of the archaeological record. In particular, built structures on the site are generally in poor condition and lack integrity. Certain individual features (such as the privy, #3, and the dump #4), nonetheless, appear quite intact.

4.23 Karma Mill and Mine (CA-KER-4448H)

The Karma mill site and mine is approximately due south of the Wegmen Complex, and is thus on the northern slope of Soledad Mountain (Figure 12). Like other mine and mill sites, the Karma covers a considerable surface area, but most of the archaeological features are concentrated around the mill area with other features concentrated around adit portals at some distance from the mill site. The primary concentration of archaeological remains at the Karma falls around the mill area at the northern, downslope end of the site (Figure 16). This comprises an area about 10,000 square meters in size.

Archaeological features at the Karma site are summarized in Table 4. In the mill site area the most intact features are a concentration of structural remains and artifacts centered on a standing head frame, vertical shaft, and hoist and pump house (Feature #1; see Figure 16). The head frame

and hoist house are shown in the 1904 Gerner photo and are thus clearly turn-of-the-century in age. A small metal structure is also shown behind the house hoist in this photo; remnants of it are still present. It may represent a blacksmith's shop. An adit and narrow gauge railroad track is also shown to the southeast of these structures; these are still present on the site, and appear to be part of the haulage level infrastructure of the site. In addition to these early structural remains, a series of later (presumably Depression era) additions are present. These include a small complex of metal and concrete buildings/rooms, southeast of the hoist house; water tanks to the southwest; and a fake adit (dead-ending a few feet into the slope) and false narrow gauge rail track (e.g., rails bolted in place with red-painted sheet metal washers and wood screws) immediately southwest of the hoist house. We presume these last features were constructed for a film set. Aside from the additions, the structural remains of Feature #1 are largely intact.

A large wooden and metal truck ore chute and jaw crusher (Feature #2) are located immediately north of Feature #1, at the end of a haulage ramp. These are modern age, as they are not shown in the early photos of the mill, and have a date scribed into the concrete jaw crusher foundation of 1980. The jaw crusher was made by Alloy Steel and Metals Co., 55th and Alameda, Los Angeles, and is Model 10x20, Type KH, Serial #490.

The remains of an assay office/laboratory (Feature #3) were found to the northwest of the ore chute. These consisted of a cobble foundation, a few pieces of milled lumber, and a large quantity of crucibles, cupules, fused silica and broken bottle glass. This assay office is depicted on the 1933 mineral survey plat for the patent of the property, noted previously (U.S.

Mineral Survey No. 6140; Figure 15). Many of the crucibles are embossed with "BATTERSEA WORKS ENGLAND", equivalent to examples found in Cobble City.

Below and to the north of these features is the area of the original mill (Features #4, 5 and 6). Extant remnants of the mill consist of the foundation and a small amount of the original machinery; the mill building, per se, is no longer in existence. Original machinery includes four sets of five-stamp mills, miscellaneous parts of hoppers and (presumably) agitators. The stamps are not in original position nor intact, with the cams and other upper parts missing; all that is currently present are the stamps themselves and the stamp boxes. These are embossed with "RISDON IRON WORKS" over "S.F. CAL 1890" or "S.F. CAL 1889". This is consistent with the historical accounts (summarized previously), which indicate that used equipment was purchased for the mill, and that it was brought on-line in two separate events.

Cyanide tank foundations (Feature #5) are present immediately downslope (north) of the stamp area. This consists of a large, raised concrete and fieldstone pad which originally supported two or three cyanide tanks. The only remnants of these barrels still present are piles of metal hoops. A series of ground-level chutes or aisles containing narrow gauge rails run into the pad, and therefore under where the tanks originally sat; these presumably were used for removing concentrate from the tanks.

The rails extend to a large furnace or retort (Feature #6) to the northwest of the tank foundations. This contains a series of intact fire-boxes, along with a crucible dump, but no extant structural remains (i.e., in the sense of

building walls). The crucibles, again, are embossed "BATTERSEA WORKS", as with other examples from the assay office and Soledad City. Firebricks present around the furnace include examples embossed with "St L FB & C Co" over "LA CAL" and "DENVER FIRE CLAY CO". What looks to be the remnants of a small, burned structure, consisting of a partly buried level pad and burned lumber, is present to the east of the furnace. Mill tailings extend from this area to the north and northeast.

Other features associated with the Karma mill are all to the south of the head frame and hoist house, and are related to the mining, per se. They include a large glory hole and various adits (Features #7, 8 and 9).

Artifacts noted at the Karma site were all primarily industrial/mining related; that is, we noted no dumps or residential debris. With the exception of some of the large mechanical remains (e.g., the stamp mills) and the artifacts surrounding the assay office and the furnace, the surface artifacts appeared primarily to be Depression era or later in age. For example, the hoist house and some of the structures immediately around it contain a large quantity of remains in the form of nuts, bolts and so on; many of these were galvanized and appeared relatively recent in age. Furthermore, Mrs. Meehl (personal communication, 1995) and other sources indicate that the mine was operated during the 1930s, with ore processed at the Golden Queen Mill.

The condition of the Karma site is quite variable, with the specifics of condition dependent upon the individual feature considered. The head frame and hoist house, for example, appear to be very intact, even though built in the early 20th century. On the other hand, the mill, which burned

in 1947, is now limited to its foundations with a few remnants of the mill machinery. Overall, then, condition varies from good to very poor, but in general there is more missing than is present.

4.24 Queen Esther Mill and Mine (CA-KER-4449H)

The Queen Esther mill and mine site is located immediately west of the Karma, with the original claims abutting one another. Like the Karma, the Queen Esther consists of a dense concentrations of features around the original mill, with a series of mine features scattered at some distance up the slope of Soledad Mountain to the south (Figure 16). The mill area falls within a zone about 175 by 175 meters in size, for 30,625 square meters. Ore chutes and adits extend intermittently up slope (south) for at least 250 linear meters. A very large tailings pile extends to the north (downslope) of the mill. At least one wood frame building is buried in these tailings, currently with just its roof extending above the tailings. Judging from the 1904 Gerner photos, a series of other buildings may also be buried in these tailings, but this one evident building is approximately 100 meters north of the mill area per se.

The archaeological features observed at the Queen Esther site are summarized in Table 4; see also Figure 16). The mill structure itself (Feature #1) is a large wooden multi-story building that it in the process of collapsing. Almost all of the internal machinery for the mill was removed at some point; the only part of the mill machinery we observed was at the top of the upper ore chute leading into the mill (a location that could not, for safety reasons, be approached), where a large jaw crusher is present.

Two collapsing wooden buildings (Features #2 and 3) are located immediately downslope of the main mill structure. These are quickly being buried with mill tailings. The upper of these two buildings (Feature #2) apparently served as the assay office/laboratory, judging from the crucible dump and furnace at the northern side of this structure. It consists of three rooms. Again, the crucibles are stamped with "BATTERSEA WORKS ENGLAND", as with other crucibles found at the Karma and Soledad City sites. A third wooden structure (Feature #4), alluded to earlier, is nearly buried by the downslope movement of tailings, about 100 meters north of the mill area. It is a board and batten (?), gabled structure with a sheet metal roof, and is apparently one of a series of such buildings that once existed below the mine, judging from the 1904 Gerner photo.

A series of tanks, and the remnants of a large rectangular building (Feature #5) that held these tanks, are located immediately east of the mill building proper. (The rectangular building is evident in a Gerner photo; its use for tanks is inferred from the presence of tank hoops on the floor; see Figure 2a). This building has entirely collapsed, but the milled lumber of the walls is still lying in place.

A series of features is located immediately to the east of the mill building (Feature #6). At some point, this area of the site was used to stockpile tar, presumably to tar the roads, or as low-grade fuel for the mill. The result is that this area includes a number of piles and ponds of tar, making certain identification of archaeological features difficult. Still, it is apparent that a collapsed wood building, a cobble and wood foundation for tanks, two cobble structure foundations and a small dump of industrial and habitation

debris (e.g., tin food cans) are present in this area.

Because of the rapid downslope movement of mill tailings in and around the Queen Esther site, few areas of exposed ground surface are present, and so the number of artifacts observed was relatively limited. As implied above, a dense concentration of cupules and crucibles is present in the area of the assay office. The dump area contained with Feature #6 contained a quantity of hole-in-top cans, wire and broken glass, mixed with charcoal and tar. We also noted to embossed bottle bottoms: a green pint bottle bottom with "ABC" over "B20"; and "IPCCo" in a diamond over "2035" on an amber 16 ounces bottle. We also noted an overall button with "STRONG" over "HOLD", and a heart-shaped Car Hearts brand button. This had "UNION MADE" over a trolley car. Car Hearts buttons were also found in Cobble City, as noted above.

Generally, the archaeological remains at the Queen Esther site are in fair to poor condition, again depending upon specific feature. The architectural integrity of the various buildings at the site are now close to entirely lost, but the site maintains integrity as an archaeological as opposed architectural cultural resource.

4.25 Golden Queen Mill (CA-KER-4451H)

The Golden Queen mill area is depicted in Figures 12 and 17, with noted features summarized in Table 5. Barring two outlying features (discussed below), the site covers an area that is approximately 175 meters E-W by 90 meters N-S, or 15,750 square meters. All of the archaeological remains

at the Golden Queen locality are Depression era or later in age, as well-documented in the historical records summarized previously. Furthermore, little of the Depression era mill is still in existence, the primary remnants of it being simply concrete foundations and pads.

The primary extant archaeological remains are all in the mill area below the haulage level adit (Feature #3). These are limited to five large agitator tanks (Feature #5); two Oliver drums (Feature #7); and a standing concrete structure (Feature #6). This is a large building made from concrete forms, with a wood roof, which is still intact. It is located immediately northeast of the site of the mill structure, per se, and appears to have been used, in the recent past, as a shop building. Originally it may have served to hold concentrating tables, judging from the interior floor drainage system. It is also worth noting that a third large Oliver drum is located about 200 meters downslope, having apparently been rolled or fallen off its foundation.

Two outlying features were also recorded as part of the Golden Queen complex based on a similarity in age to the mill; arguably, they could be considered separate sites. The first of these (Feature #8) is a small leveled pad and vertical shaft located a short distance west of the edge of the Golden Queen mill tailings. There is a very small quantity of Depression era trash next to this small pad (approximately 10 x 10 m in size), consisting of some ceramic shards and sanitary seal cans. One of the sherds is a piece of whiteware with a maker's mark. This consists of a printed HLC monogram over "HOMER LAUGHLIN" over "VIRGINIA ROSE" over "MADE IN USA" over "A34N.8". This derives from the Homer Laughlin China Company of East Liverpool, Ohio, which has made whiteware

ceramics from 1877 to the present (DeBolt 1988:43-45). The HLC monogram on this specimen is characteristic of 1930s production for this company; Virginia Rose is the transfer pattern for the tableware; and the bottom code indicates that it was produced in January, 1934, at Homer Laughlin factory #8. It is a clear indicator of middle to late 1930s age for this archaeological locality.

The second outlying feature (#9) is a a one room, concrete and fieldstone cobble structure, located along the road near the western entrance to the Golden Queen mill site. It is a gabled structure, currently roofless, that appears to have been burned. No artifacts were found on the groundsurface at this locale but, based on the construction techniques, it appears to be Depression era or later in age. Furthermore, based on the presence of two doors (into a one room structure), it seems most likely that it served as an office, perhaps at the entrance to the facility.

The large majority of the Golden Queen mill site is in very poor condition. From the perspective of architectural or industrial remains, essentially all integrity has been lost, and there is only a minimal amount of archaeological information that appears extant at this locale.

4.26 Echo Mill Site (CA-KER-4450H)

The Echo Mill site is located west of the Golden Queen, at the base of a large arroyo leading up Soledad Mountain (see Figures 12 and 17). Extant remains at this locality currently cover an area that is approximately 85 meters in diameter, representing roughly 5670 areal meters square.

Archaeological features noted at this locality are summarized in Table 5.

As is immediately evident in this table, very little is left of the original structures and other features that were once present at this site. The 1904 Gerner photo of the site shows a ramp and haulage bridge leading to a mill structure, surrounded by a series of mill outbuildings, cabins and outhouses. None of these are still standing and, in fact, barely any extant remnants of these are still present. This appears primarily to reflect the fact that the mill tailings from the site have enveloped the area once occupied by cabins, outbuildings and other structures, and the fact that the mill itself was, circa 1905, entirely dismantled. It is possible, of course, that additional features are buried under the mill tailings.

Currently, the only features of archaeological interest on the site is the remnant foundation for the mill (Feature #4), which consists of concrete and mortared-cobble foundations; an assay dump area (Feature #5) and possible privy (Feature #6). We noted foundations for stamps, a boiler and a possible foundation for tank support. It is possible that additional, smaller structural remains may be present immediately adjacent to the mill foundations.

The Echo Mine and Mill site is currently in very poor condition and retains little of its original integrity.

4.27 Gypsy Starlight Adit and Chutes (CA-KER-4453H)

This is a small site located on the eastern side of a northwestern ridge off

Soledad Mountain (see Figures 12 and 17); the Echo Mine is immediately below it. The Gypsy Starlight site consists of an adit, a long open-cut, three ore haulage ramps, and a small dump, which extends down the side of one of the ore ramps. With the exclusion of the long, linear open cut, the site measures approximately 60 by 60 meters, or 3600 square meters in size.

Although it is likely that this locality was first worked earlier, extant remains at the Gypsy Starlight site appear to be Depression era or later in age. Features at this site are in moderate to poor condition.

4.28 Silver Queen Area Features (CA-KER-4452H)

A final archaeological locality was identified high towards the western side of Soledad Mountain, within the Silver Queen claim, and thus has been designated the Silver Queen area (Figures 12 and 17). It consists of only a few features: an adit and concrete compressor foundation, a "double" glory hole or open cut, an ore chute and, on the edge of a tailings pile, a small metal building; and a collapsed wooden structure and ore chute. All of these features are Depression era or later in age and are in poor condition.

4.29 Bobtail Area Features (CA-KER-4454H)

The Bobtail Area mining features fall primarily outside of the current study area. However, four of the miscellaneous features which comprise this clustering of historical mining features on the west side of Soledad Mountain are within the study area (see Figures 12 and 17, and Table 5).

One of these (Feature B7) is a small unmortared cobble structure that resembles the buildings at Cobble City, and therefore may be early 20th century in age. No artifacts were noted in association with it. A second feature (Feature B5) is a Depression era single-bin truck ore chute. The Soledad Extension Mine, associated with the 1930s activity at the Golden Queen, is represented by a concrete foundation to a changing room and/or compressor shop (Feature B6). Finally, a small head frame/hoist is also present (Feature B8). This may be modern in age, and does not appear to have ever been operable, due to faulty design. All of these features are in poor condition.

5.0

SUMMARY AND RECOMMENDATIONS

5.1 Summary

An intensive Phase I survey was conducted for the Golden Queen Mine project area on Soledad Mountain, Mojave, Kern County, California. This involved background studies of published and unpublished documents, reports and other sources pertaining to the prehistory, ethnography and history of the study area; a complete (100%) intensive survey of the study area; and the recording and preliminary evaluation of archaeological sites within this study zone.

The Phase I survey resulted in the discovery and recording of nine archaeological sites, all of which are historical (Euro-American) in nature, and resulted from the mining activities on the mountain. These can be summarized as follows:

CA-KER-4446H - "Cobble City" is a large residential area that was associated with the Queen Esther Mine and Mill, and dates from about 1904 to 1920.

CA-KER-4447H - The Wegmen homestead, which includes a series of features and structures associated with the Karma Mine and Mill, and date from about 1903 into the recent past.

CA-KER-4448H - The Karma Mill, which was in operation from 1903

to 1909, with the mill structure burning in 1947.

CA-KER-4449H - The Queen Esther Mill, portions of which are still standing, and was operated from 1903 to 1910.

CA-KER-4450H - The Echo Mill, which ran from 1903 to 1905, when it was dismantled.

CA-KER-4451H - This is the Golden Queen Mine and Mill, which was constructed during the 1930s and was dismantled about 1950.

CA-KER-4452H - The Silver Queen area features, which consist of a small clustering of Depression era or later mine features.

CA-KER-4453H - The Gypsy Starlight Features, which comprise a small grouping of ore chutes and ramps.

CA-KER-4454H - The Bobtail Area features, four of which fall within the current study area, and which consist of one probable turn-of-the-century cobble structure, and three Depression era or later mining features related to the Soledad Extension Mine.

5.2 Recommendations

The Phase I archaeological survey of the Golden Queen Mine study area resulted in the discovery of nine historical archaeological sites, eight of which are entirely within the study area, with one falling partly within the

study zone. Development of the Golden Queen Mine, accordingly, has the potential to result in adverse impacts to cultural resources. Based on the guidelines provided by Appendix K of the California Environmental Quality Act, therefore, we recommend that a Phase II test excavation and determination of site significance be conducted, from which final recommendations for the treatment of these cultural resources may be made.

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7.0
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TABLE 1: THIRTEENTH CENSUS (1910) - SOLEDAD & QUEEN ESTHER MINE

Name	Male/Female	Age	Mar. status	Occupation	Origin
Esquivel (?), Bernardo (?)	M	30	S	Miner	Spain
E....., Nikita (?)	M	30	S	Miner	Slovenia
Rustiniak (?), John	M	22	S	Miner	Slovenia
Knox, Robert	M	25	S	Miner	Canada
(?), Charles	M	52	M (12)	Miner	Pennsylvania
Conroy, William	M	21	S	Miner	Massachusetts
Woodward, (?)	M	50	M (11)	Miner	Ohio
Woodward, Louis (?)	F	36	M (11)	None	Iowa
Williams, Jon	M	32	S	Miner	England
Bass, William H.	M	43	S	Miner	Ohio
Ryan, John	M	30	S	Miner	Illinois
Ruseniak (?), Mike	M	37	S	Miner	Slovenia
Moriarty (?), C...(?), Jr.	M	47	Wd	Miner	England
Malatin (?), Mike	M	21	S	Miner	Slovenia
Baker, John M.	M	52	S	Bookkeeper	Illinois
Borden (?), Charles S.	M	42	M (0)	Engineer	England
Borden (?), Harriet L.	F	30	M (0)	None	Canada
Skrissler (?), Anton	M	30	S	Miner	Slovenia
Wegmen, Engelbert	M	37	M (12)	Watchman	Germany
Wegmen, Margaret	F	32	M (12)	None	Mississippi
Wegmen, Percy	M	10	S	None	Mississippi
Wegmen, Engelbert JR.	M	8	S	None	Mississippi
Wegmen, Margaret	F	4	S	None	Mississippi
Wegmen, Grace	F	3	S	None	Mississippi
Wegmen, Esthel (?)	F	1	S	None	California
Feldt, Benjamin	M	52	M (0)	Miner	Germany
Feldt, Bertha	F	32	M (0)	None	Iowa
Corvich (?), Mike	M	37	M (10)	Miner	Slovenia
Corvich (?), Kate	F	45	M (10)	None	Slovenia
Corvich (?), Cris	M	11	S	None	Slovenia
Corvich (?), Mary	F	9	S	None	Slovenia
Nichols, Russ	M	10	S	None	Oregon
Rogenovich (?), Mike	M	45	S	Miner	Slovenia
Cranston, John	M	45	S	Miner	England
Barra (?), John	M	29	S	Miner	Italy
Knapp, (?) R.	M	58	M (8)	Miner	Ohio
Hardey, Analee (?)	F	35	S	Teacher	California
Hoss (?), E...(?)	M	24	S	Teamster	Minnesota
Leonis, Elbert	M	47	M (19)	Laborer	Colorado
Leonis, Alma (?)	F	36	M (19)	None	Illinois
Leonis, Viola	F	16	S	None	California
Leonis, Ida	F	13	S	None	California
Leonis, Gladys	F	12	S	None	California
Leonis, Elbert	M	8	S	None	California
Monroe, Edward	M	27	S	Teamster	California
Johnston, Edward	M	28	S	Teamster	Missouri
Reardon, John J.	M	40	S	Miner	New York

Walsh, W...(?) O.	M	63	Wd	Miner	Connecticut
Goldsmithy (?), George	M	27	S	Miner	Colorado
McBryant, Geo.	M	45	M (8)	Watchman	Ohio
McBryant, Agnes	F	34	M (8)	None	Ohio
McBryant, Harold	M	6	S	None	Arizona
McBryant, George	M	5	S	None	California
McBryant, Dorothy	F	4	S	None	California
McBryant, Roy	M	2	S	None	California
Nussbaum, George	M	32	M (2)	Superintendent	Colorado
Nussbaum, Bessie	F	26	M (2)	None	Colorado
Lytle, Myrtle	F	38	M (19)	Manager	Iowa
Lytle, William G.	M	47	M (19)	Foreman	Iowa
Lytle, William G.	M	15	S	None	Colorado
Stimman (?), Lena	F	30	S	Waitress	Germany
Hoyt (?), Charles A.	M	64	M (42)	Chemist	Massachusetts
Hoyt (?), Laura J.	F	60	M (42)	Housekeeper	New York
Urban, John	M	21	S	Waiter	California
Snellidon (?), Thomas	M	40	S	Camp collier ?	Indiana
Shelton, Chas. H.	M	46	M (13)	Mine foreman	California
Shelton, Ruth (?)	F	34	M (13)	None	California
Shelton, Chester	M	12	S	None	California
West, Frank S.	M	35	M (5)	Machinist	England
West, Maria	F	35	M (5)	None	Iowa
West, Ruth	F	4	S	None	California
Jiddon (?), Horace	M	54	S	Blacksmith	Kentucky
Distefano, Dominic	M	41	M (17)	Blacksmith asst	Italy
Hanson, Armstrong (?)	M	36	S	Assayer	England
Bern (?), Maron (?) L.	M	24	S	Mine carpenter	Pennsylvania
Garibaldi, Joe	M	22	S	Mine helper	Italy
McColville (?), John	M	31	M (2)	Assayer	Iowa (?)
McColville (?), Freda	F	24	M (2)	None	Germany
Esquidora, Augustin	M	25	S	Mine laborer	Italy
Abbona (?), George	M	22	S	Mill hand	Italy
Castamaria, John	M	26	S	Mill hand	Italy
Camon (?), John	M	34	M (5)	Mine laborer	Mexico
Esquimena (?), Andres	M	32	S	Mill laborer	Mexico
Hass, Mary	F	37	S	Waitress	New York
Bringas (?), Anton	M	30	S	Miner	Slovenia
Stam (?), George	M	45	S	Miner	Slovenia
Baldo, C...(?)	M	32	S	Miner	Slovenia
G...(?), Mircea (?)	M	24	S	Miner	Slovenia
Mossman (?), Anton	M	26	S	Miner	Italy
Diondo (?), Piggo (?)	M	28	S	Miner	Italy
Parith (?), Pando	M	20	S	Miner	Slovenia
Parith (?), Pita	M	28	S	Miner	Slovenia
Panotovich (?), Louis	M	25	S	Miner	Slovenia
Carlson, Charley	M	41	S	Miner	Sweden
Nolan, George	M	47	M (0)	Miner	Pennsylvania
Nolan, Esther	F	40	M (0)	None	Connecticut
Gregory, Anton	M	45	S	Miner	Wisconsin

TABLE 2: FEATURES AT COBBLE CITY (CA-KER-4446H)

Feature #	Description	Size	Comments
2	Cobble structure	4x5m	3 standing walls; burnt; Depression era trash
3	Leveled pad	9x7m	Edged by fieldstone, w/cobble path uphill
4	Cobble structure	6x4m	Burnt; post-1947 trash present
5	Cobble structure	6x4m	Cement plastered; Depression era trash
6	Cobble structure	5x4m	Burnt; Depression era trash
7	Cobble structure	5x3m	Assoc'd w/ #8; terraced
8	Leveled pad	9x4m	Assoc'd w/ #2; edged by cobbles
9	Cobble structure	6x4m	Assoc'd w/ ~1900-1920 remains
10	Cobble structure	4x5m	Partial dug-out; ~1900-1920 artifacts
11	Cobble structure	8x7m	W/ dense artifact scatter; ~1900-1930s
12	Cobble structure	10x7m	2 or 3 room structure; ~1900-1920 artifacts
13	Cobble structure	8x5m	Lg single room, partly buried
14	Cobble structure	4x5m	Interior overgrown w/ plants
15	Cobble structure	4x10m	Lg single room; ~1900-1920 artifacts
16	Cobble structure complex	17x13m	4 abutting bldgs; gabled; burnt; ~1900-1920
17	Cobble structure & dug-out	4x7m	Collapsed; ~1900-1920 artifacts
18	Cobble structure complex	15x18m	8 abutting rooms; ~1900-1920 artifacts
19	Cobble structure complex	10x7m	2 rooms; ~1900-1920 artifacts
20	Leveled pad	11x9m	Lg; ~1900-1920 artifacts; assoc'd w/ #27
21	Cobble structure complex	6x11m	3 rooms + terrace; ~1900-1920 artifacts
22	Cobble structure complex	8x9m	3 rooms + terrace; ~1900-1920 artifacts
23	Dump	10x10m	Small dump near #4; ~1900-1930s
24	Dump	12x10m	Small dump below #8; ~1900-1920
25	Water tanks	20x20m	2, assoc'd w/ collapsed structure & debris
26	Dump	15x15m	Near #33; ~1900-1920 artifacts
27	Privy	2x2m	Assoc'd w/ #17
28	2 Privies	2x2m & 2x2m	Assoc'd w/ #19, on either side of E end
29	Privy	2x2m	Closest to #21
30	Dump	30x30m	Modern, but assoc'd w/ ~1900-1920 scatter
31	Pad & Privy	3x2m & 2x2m	~1900-1920 artifacts; near #29
32	Dump	20x20m	~1900-1920 artifacts
33	Vertical shaft	10x10m	On USGS topo; covered w/ timbers
34	Vertical shaft	10x10m	On USGS topo; covered w/ timbers
35	Water line	500m long (?)	Runs from #24 to Queen Esther
36	Cobble fdn & shaft	20x20m	Near Wegmen House
37	Level pad	5x3m	Edged w/ cobble, ~1900-1920

TABLE 3: FEATURES ON THE WEGMEN SITE COMPLEX (CA-KER-4447H)

Feature #	Description	Size	Comments
	Standing woodframe house	10x15m	Single-story, gable front, board & batten shake & tin roof, 3 rooms, w/ assoc'd Depression era trash & artifacts
2	Fallen wood structure	7x15m	Probably house similar to #1
3	Standing 3-hole privy	4x3m	Standing 2 room, 3-hole privy, wood constr.
4	Dump	30x45m	Turn-of-century artifacts
5	Vertical shaft & headframe	20x20m	Reymert Fraction (modern)
6	Collapsing wood structure	7x5m	1 room w/ ~1900-1920 artifacts
7	Board & batten cabin	3x4m	1 room, no roof, ~1900-1920 artifacts
8	Timber & artifact pile	5x5m	Collapsed wood structure?
9	Wood structure	10x6m	Collapsed, assoc'd w/Depression era remains
10	Dump - Depression era	9x20m	Prob. assoc's w/ #9
11	Collapsed wood structure	8x12m	On terraced pad; age ?
12	Cobble foundation	6x10m	Assoc'd w/ 1910-1930s cans
13	Vertical shaft & dug-out (?)	10x10m	Assoc'd w/ #5 (?)
14	Wegmen house complex	---	Wood-sided frame w/ stucco addition, occupied to 1991; 5 assoc'd outbldgs
15	Meehl house complex (ranch)	---	Wood-sided house occupied to 1991, w/ misc ranch outbldgs, incl barn made of RR ties, concrete-bottomed pig-sties, corrals, etc.
16	Collapsed structure	15x6m	Cobble foundation w/ fallen timbers
17	Privies	2x2m each	2 assoc'd w/ #16

**TABLE 4: FEATURES AT KARMA AND QUEEN ESTHER MILLS
(CA-KER-4448H & 4449H)**

 Feature #	Description	Comments
KARMA MILL & MINE		
1	Headframe, Hoist house, Haulage adit, etc	Early 20th century + later additions
2	Ore chute & jaw crusher	Depression era
3	Assay office	Early 20th century
4	Stamp mill area	Foundation & stamps only; Early 20th century
5	Tank area	Foundations
6	Retort (?)	
7	Glory hole	
8	Adit	
QUEEN ESTHER MINE & MILL		
1	Mill structure	Collapsing
2	Assay lab	Filling with tailings
3	Wood structure	Collapsed
4	Wood structure	Buried by tailings
5	Tank foundation	
6	Dump & Asphalt work area	Tar barrels and piles
7	Ore haulage ramp	Depression era

TABLE 5: GOLDEN QUEEN, ECHO, GYPSY STARLIGHT, AND SILVER QUEEN AREA FEATURES

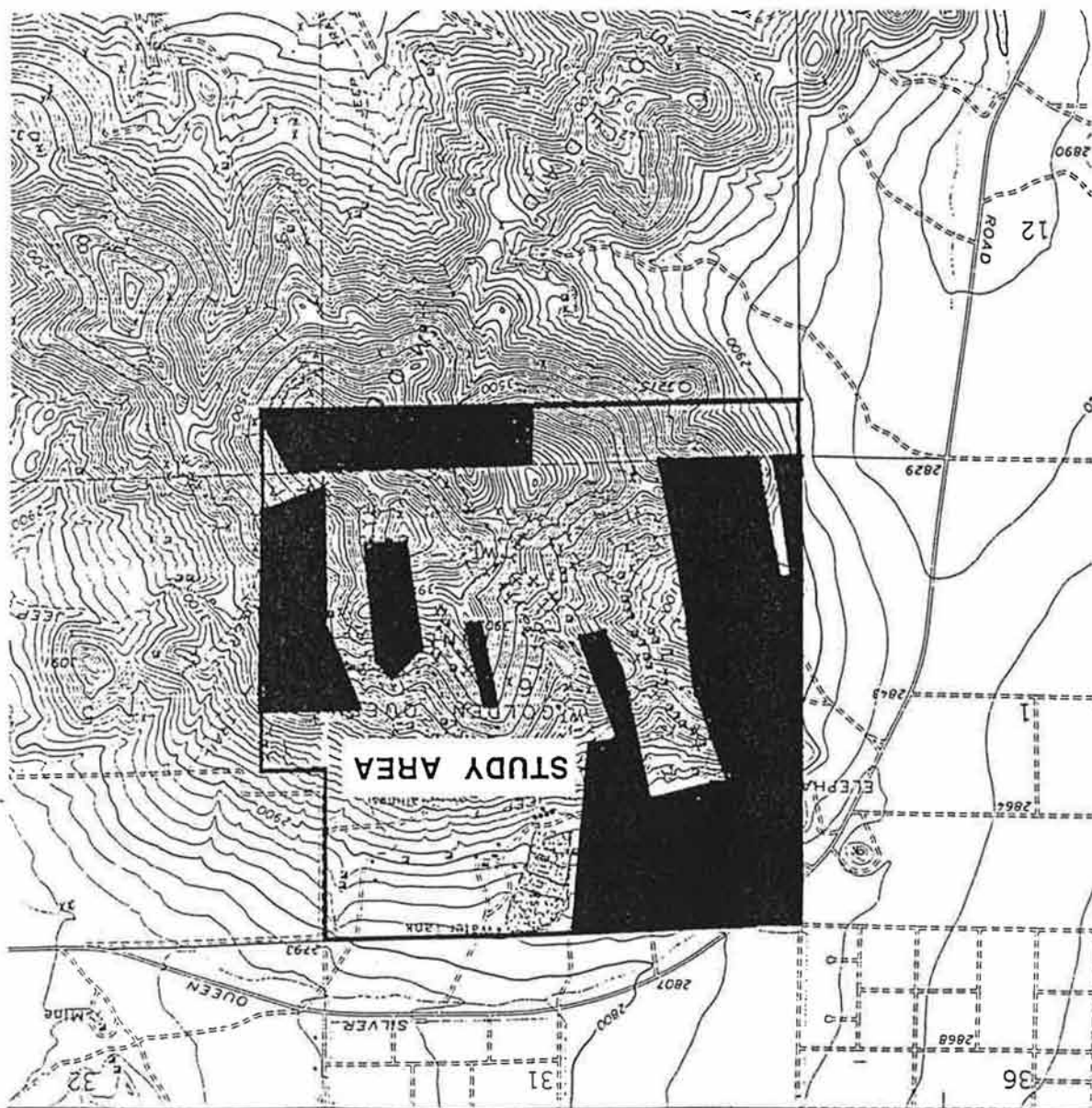
FEATURE #	DESCRIPTION	COMMENTS
Golden Queen Mill		
1	Metal Building	Modern
2	Concrete foundation	Depression era
3	Haulage level adit	
4	Concrete mill foundation	Remnants only; Depression era; burnt
5	5 Agitator vats	Depression era
6	Concrete & wood bldg	Shop structure; Depression era
7	2 Oliver drums	3rd drum ca. 200 m downslope
8	Pad & prospect	Depression era
9	Concrete structure	5x6 m, 1 room; Depression era (?)
Echo Mill		
1	Metal structure	Modern
2	Haulage level (?) adit	
3	Concrete foundation	Changing house (?); Depression era (?)
4	Stamp mill foundations	Early 20th century
5	Assay office dump	Disturbed
6	Privy	Early 20th century
Gypsy Starlight		
1	Truck ore chute	Depression era or later
2	Truck ore chute	Depression era or later
3	truck ore chute	Depression era or later
4	Adit and open cut	
5	Dump	Depression era or later
Silver Queen Mine Area		
1	Glory hole	
2	Ore chute	Depression era
3	Metal structure	Privy, modern
4	Adit & concrete foundation	Compressor room
5	Wood structure	Collapsed; Depression era or later
Bobtail Area		
B1	Pad, cobble wall & dump	Turn-of-century
B2a	Truck ore chute	Depression era or later (Bobtail)
B2b	Truck ore chute	Depression era or later
B3a	Adit and wood trestle	Depression era or later
B3b	Wood landing/ramp	Depression era or later
B4	Concrete structure	2 room, Depression era
B5	Ore chute, ramp and adit	Starlight (?)
B6	Soledad Ext Machine Rm Fdn	Concrete foundations; post-Depression + earlier remains
7	Cobble structure	2x4 m, no roof, no artifacts
8	Headframe on open cut	Deadman below using cable & 55 gal drums, modern

FIGURES

List of Figures

- 1 - The study are
- 2 - The Queen Esther Mill, ca. 1904
- 3 - The Gerner house, ca. 1904
- 4 - The Karam Mill, ca. 1904
- 5 - The Karma Mill, ca. 1904
- 6 - The Echo Mill, 1903
- 7 - The Echo Mill, ca. 1903
- 8 - The Echo Mill, ca. 1904
- 9 - The Echo Mill, ca. 1904
- 10 - The Golden Queen Mill, 1935
- 11 - Residential areas on Soledad Mountain, ca. 1904
- 12 - Sites on Soledad Mountain
- 13 - Cobble City, CA-KER-4446H
- 14 - Wegmen Site Complex, CA-KER-4447H
- 15 - 1933 Mineral Survey of the Karma Mine
- 16 - Karma and Queen Esther Sites
- 17 - Golden Queen, Echo, Silver Queen, Gypsy Starlight and Bobtail sites

FIGURE 1: The Golden Queen study area, Mojave, Kern County. Blackened areas excluded. Base map: USGS Soledad quadrangle; Scale - 1 : 2000.



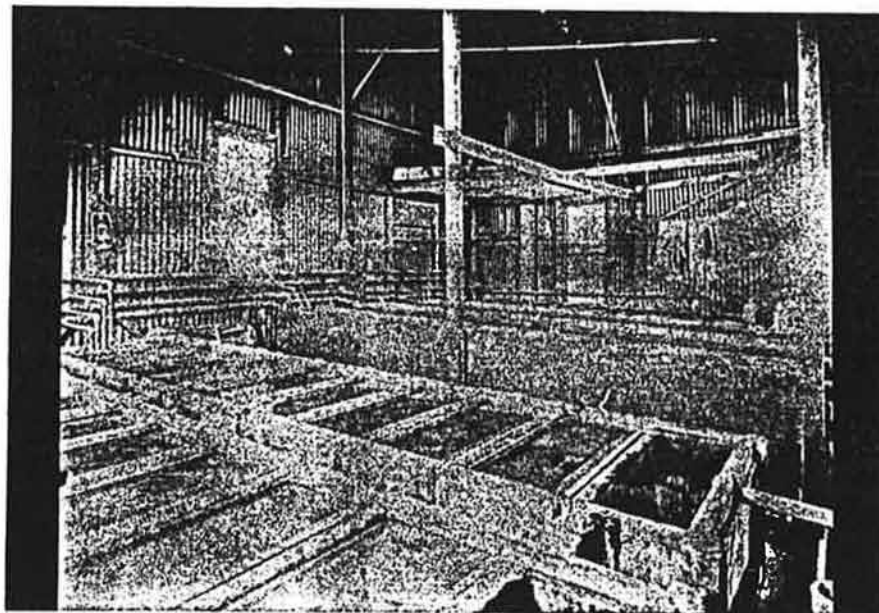
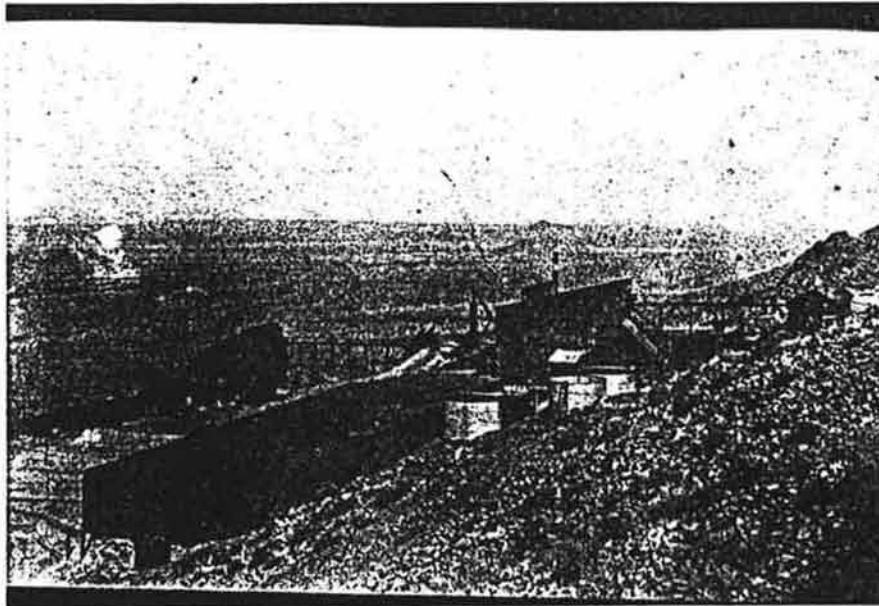


FIGURE 2 - The Queen Esther Mill, taken about 1904. **(a)** - Upper - The mill, from the southwest. the long, rectangular building in the foreground contained the cyanide vats. In the background is the Karma head frame and mill. **(b)** - Lower - Zinc tanks at the Queen Esther. Note the metal walls, which was a characteristic of this mill. (Photos by John Gerner)



FIGURE 3 - The Karma Mine and Mill superintendent's house, circa 1904, showing the Gerner family. This house, located east of the Wegmen house near the Sections 5 and 6 boundary, has been moved to the Tropico Mine, Rosamond, where it still stands. (Photo by John Gerner).

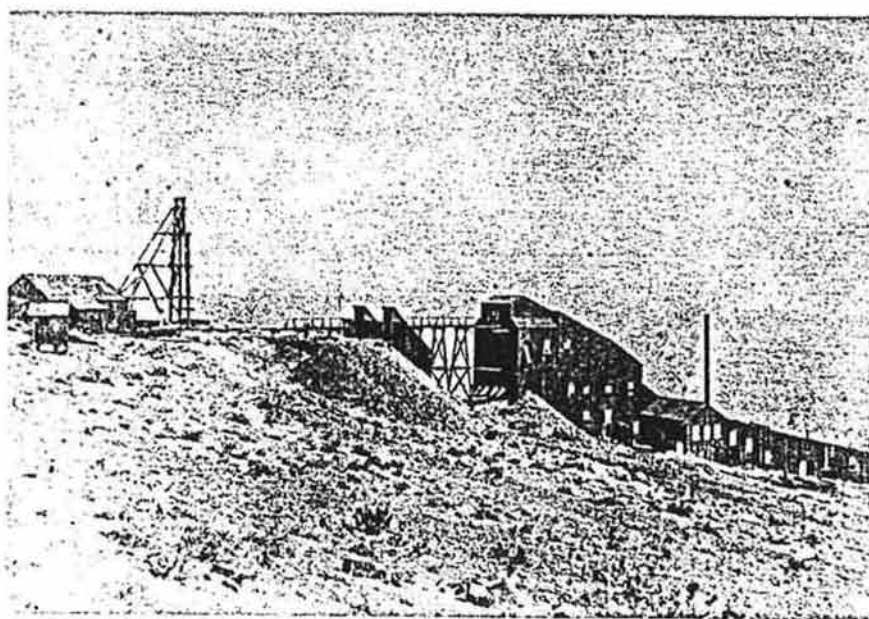
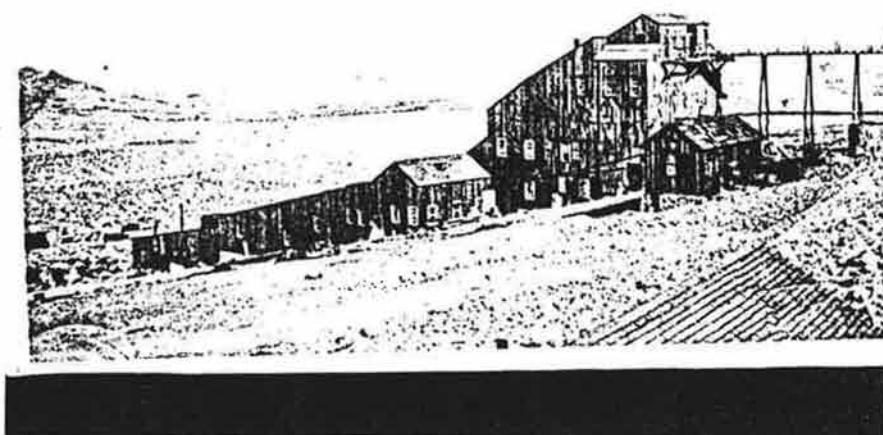


FIGURE 4 - The Karma Mill and Mine, circa 1904. **(a)** - Upper - Trestle and mill structure, viewed from southwest. **(b)** - Lower - Hoist house (left), head frame, trestle and mill structure (right), viewed from southeast. (Photo by John Gerner).

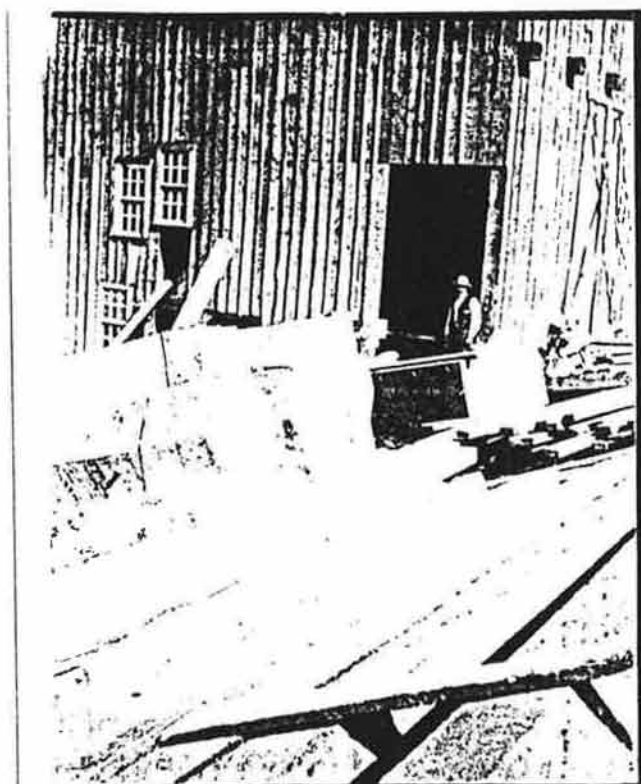
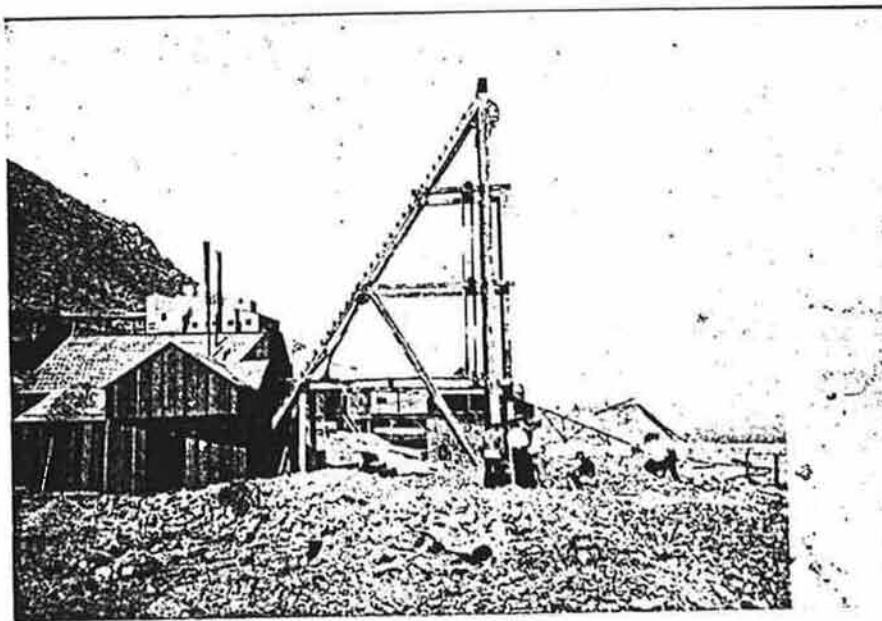


FIGURE 5 - Karma Mine and Mill, circa 1904. (a) - Upper - Head frame and hoist house (with Queen Esther Mill in background left). Note modification to corner of hoist house, required to accommodate the turning radius of a narrow gauge rail line. (b) - Lower - Installation of the concrete stamp batteries at the Karma mill. (Gerner photos).



FIGURE 6 - Echo Mill (CA-KER-4450H), October, 1903, viewed from east. Note small size of mill relative to Karma and Queen Esther. Also note saddle or notch in ridgeline, right side of photo. This is the location of the Elephant - Eagle Mill and Mine. As is clear in this photo, no development, beyond possible adits, had occurred at this location at this time. (Marion Auberry photo, CDMG).

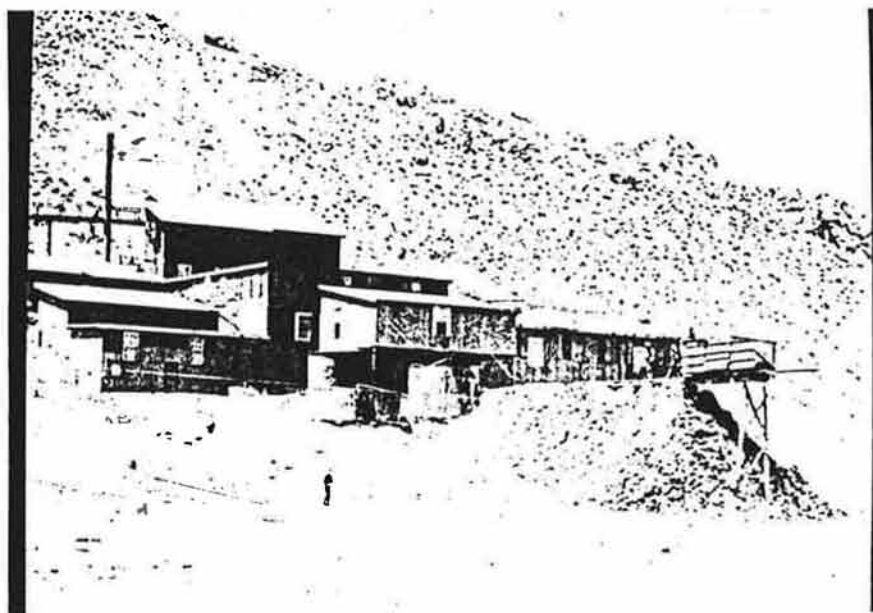


FIGURE 7 - Echo Mine and Mill, circa 1903 - 1904. **(a)** - Upper - View from northwest, in area of future Elephant - Eagle Mill (CDMG photo). **(b)** - Lower - View from northeast (Gerner photo).

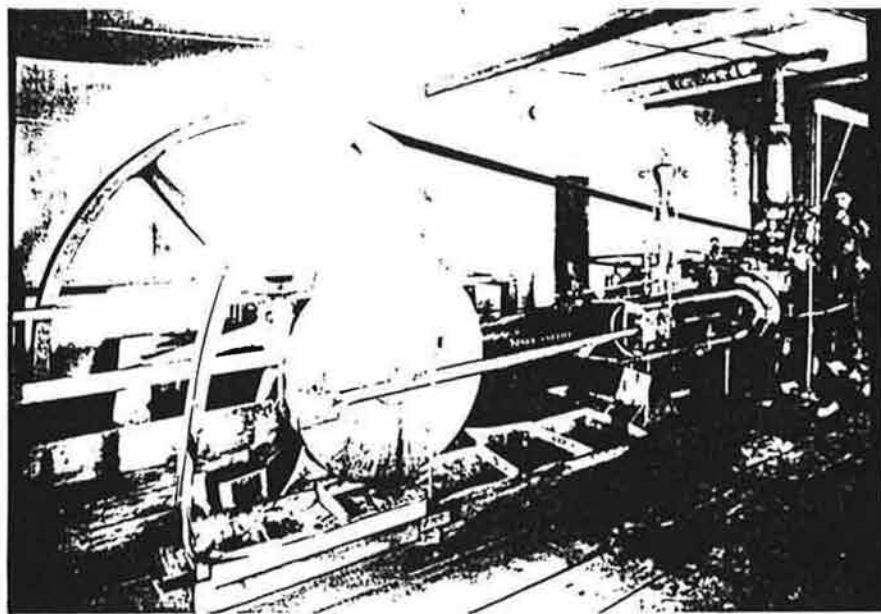
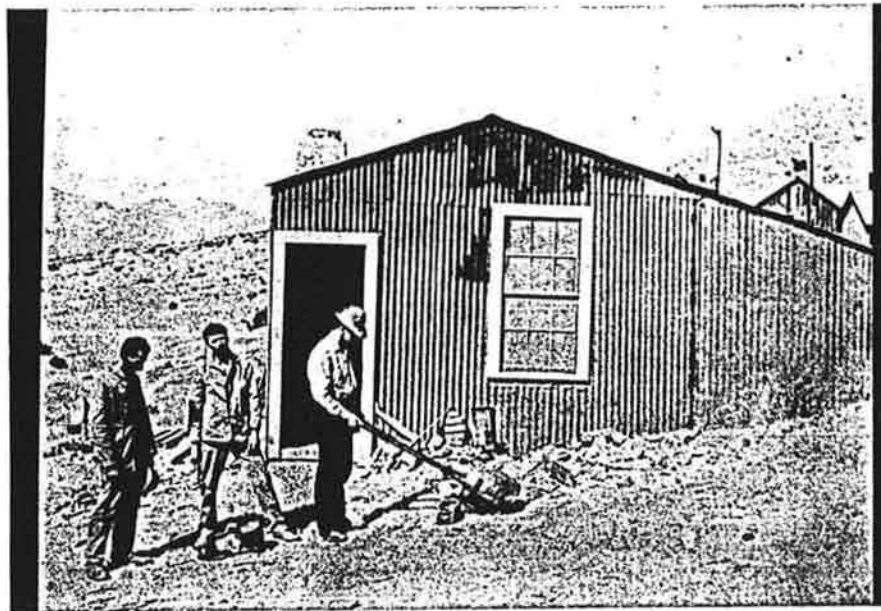


FIGURE 8 - Echo Mill, circa 1903 - 1904. (a) - Upper - "Clean-up" at the Echo; (b) - Lower - Engine room at the Echo Mill, showing large belt drive. (Gerner photos).

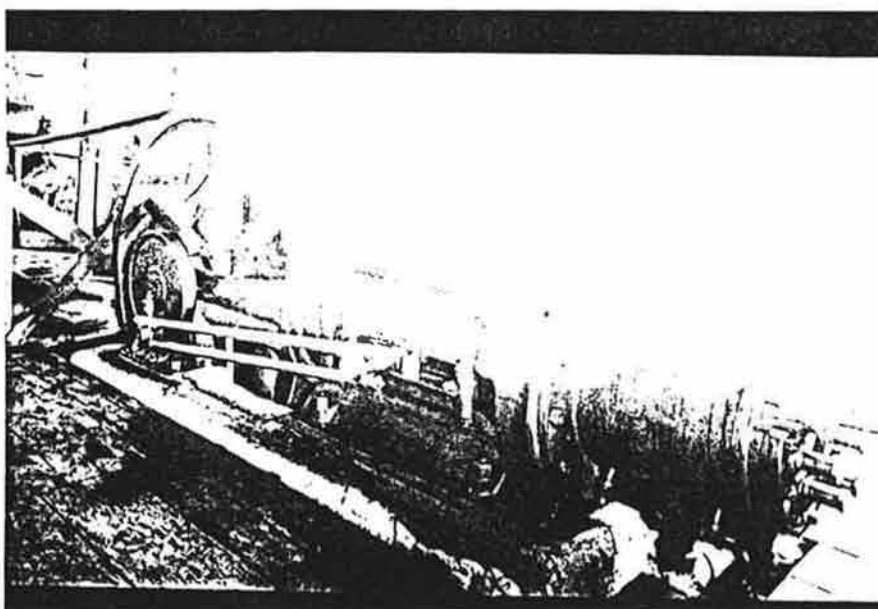
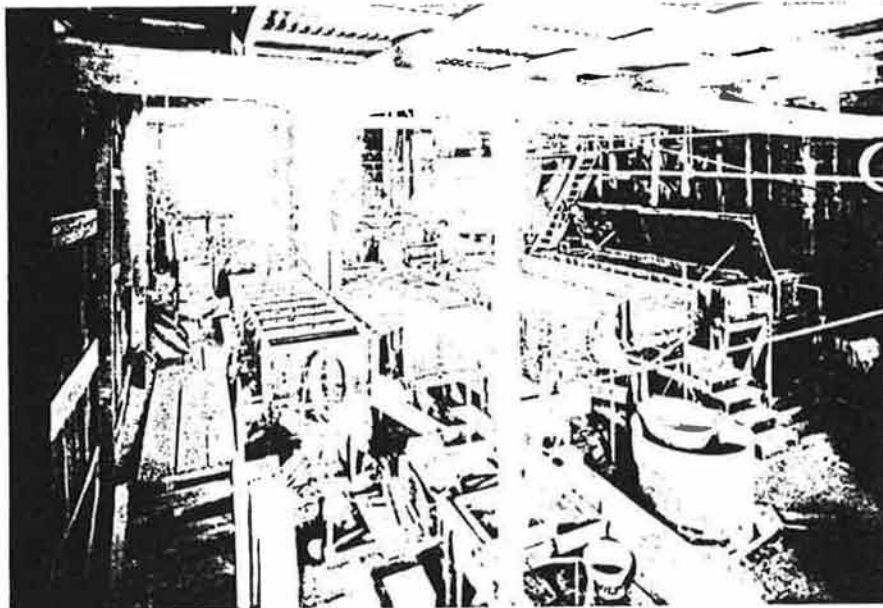


FIGURE 9 - Echo Mill, circa 1903 - 1904. (a) - Upper - Zinc tanks. (b) - Lower - Air compressor. (Gerner photos).

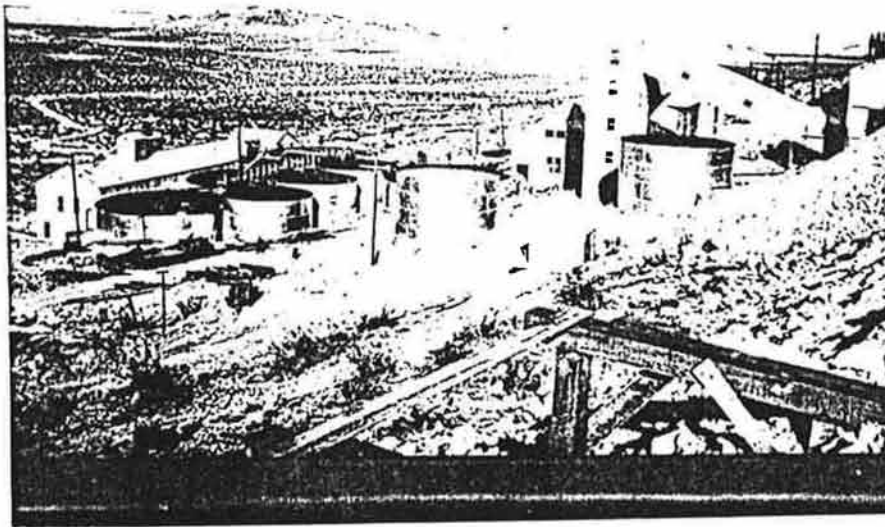


FIGURE 10 - Golden Queen 300 tons mill, looking northeast, 1935, shortly after opening (Walter Bradley photo, CDMG).

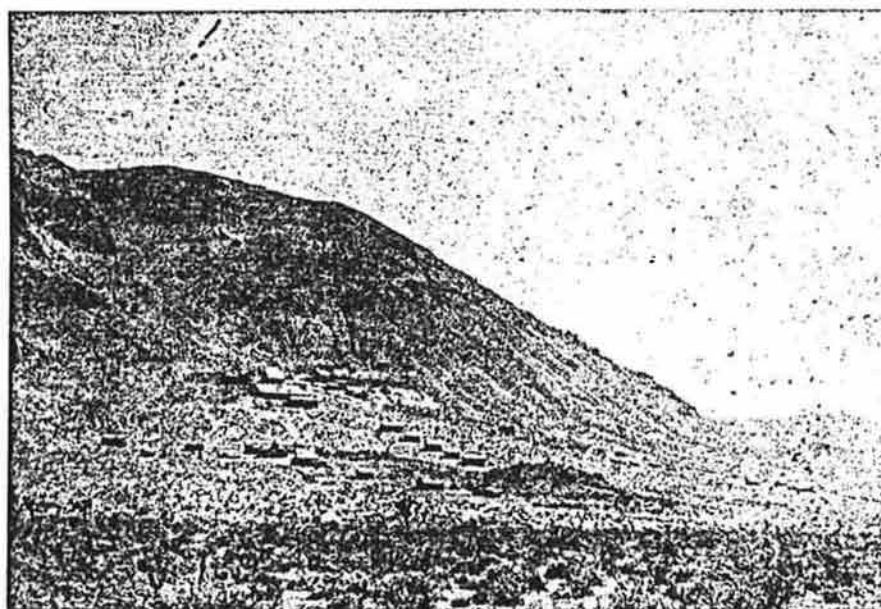
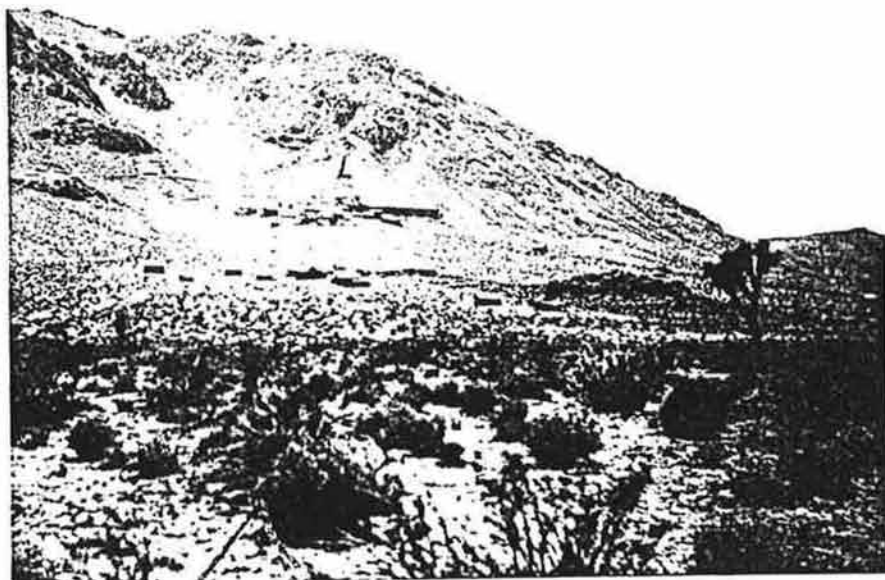


FIGURE 11 - Residential areas on Soledad Mountain, circa 1904. **(a)** - Upper - Wooden structures east of the Wegmen house, with Karma and Queen Esther Mills in the background. Viewed from northeast. (CDMG, Auberry? photo). **(b)** - Lower - Same view, slightly later. Note row of five wooden houses, lower middle of photo, and structures further west (representing "Cobble City"). (Gerner photo).

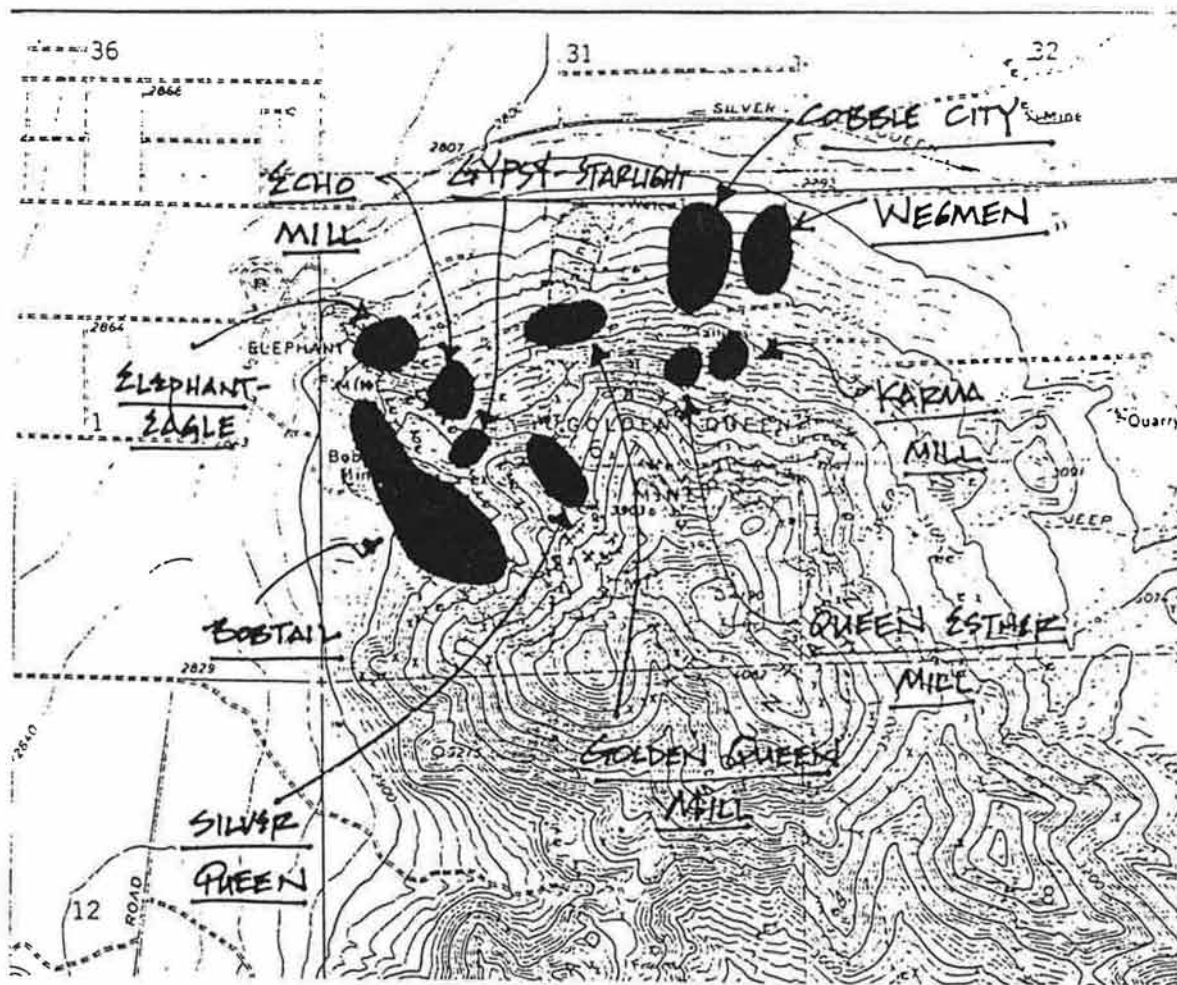


FIGURE 12: Archaeological sites within the Golden Queen study area. Note: Elephant-Eagle is outside and only portions of Bobtail are within the study area. Base map: USGS Soledad quadrangle; Scale - 1 : 2000.

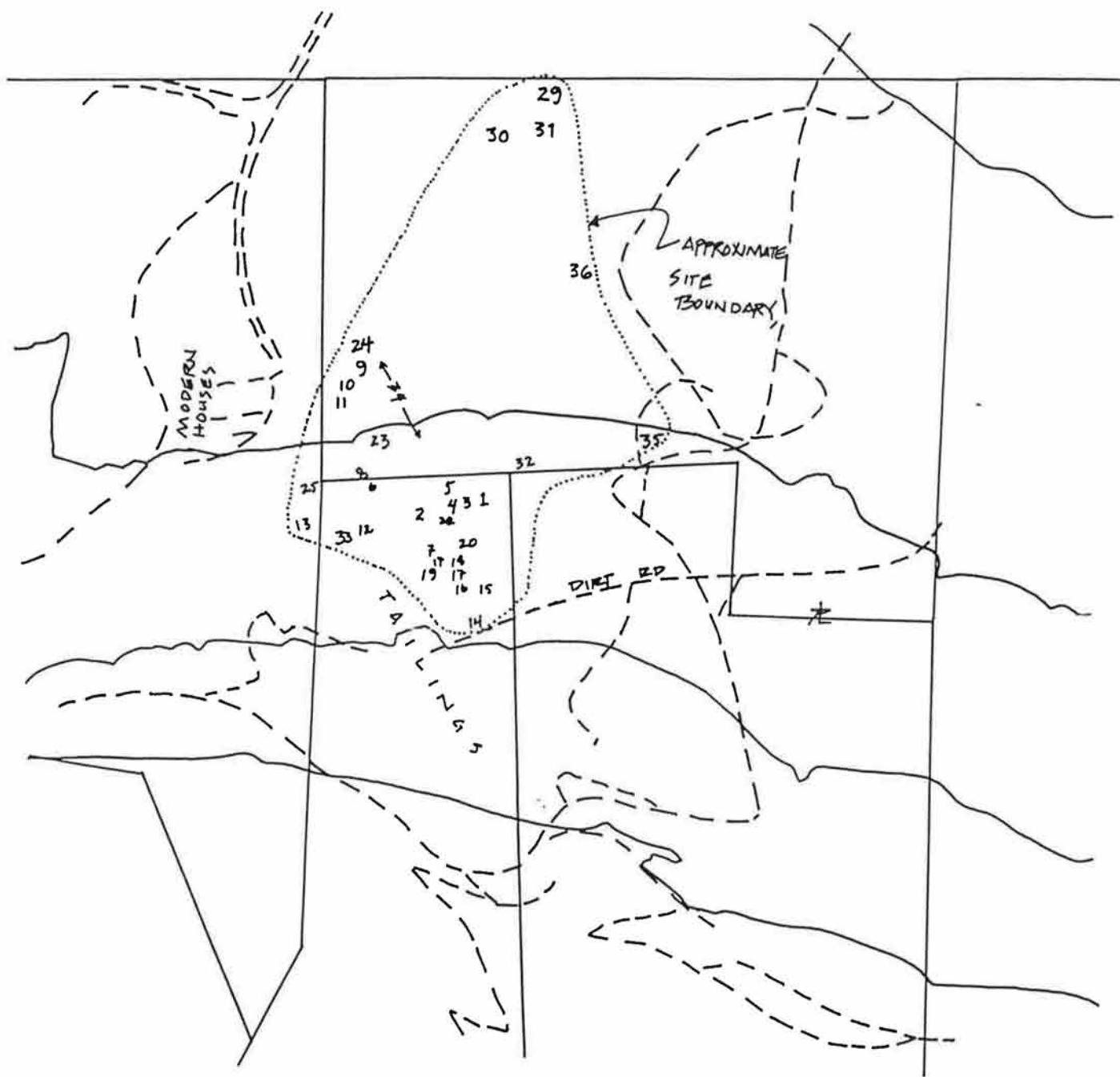


FIGURE 13: Sketch map of Cobble City, CA-KER-4446H. Numbers refer to features listed in Table 2. Scale - 1 : 400.

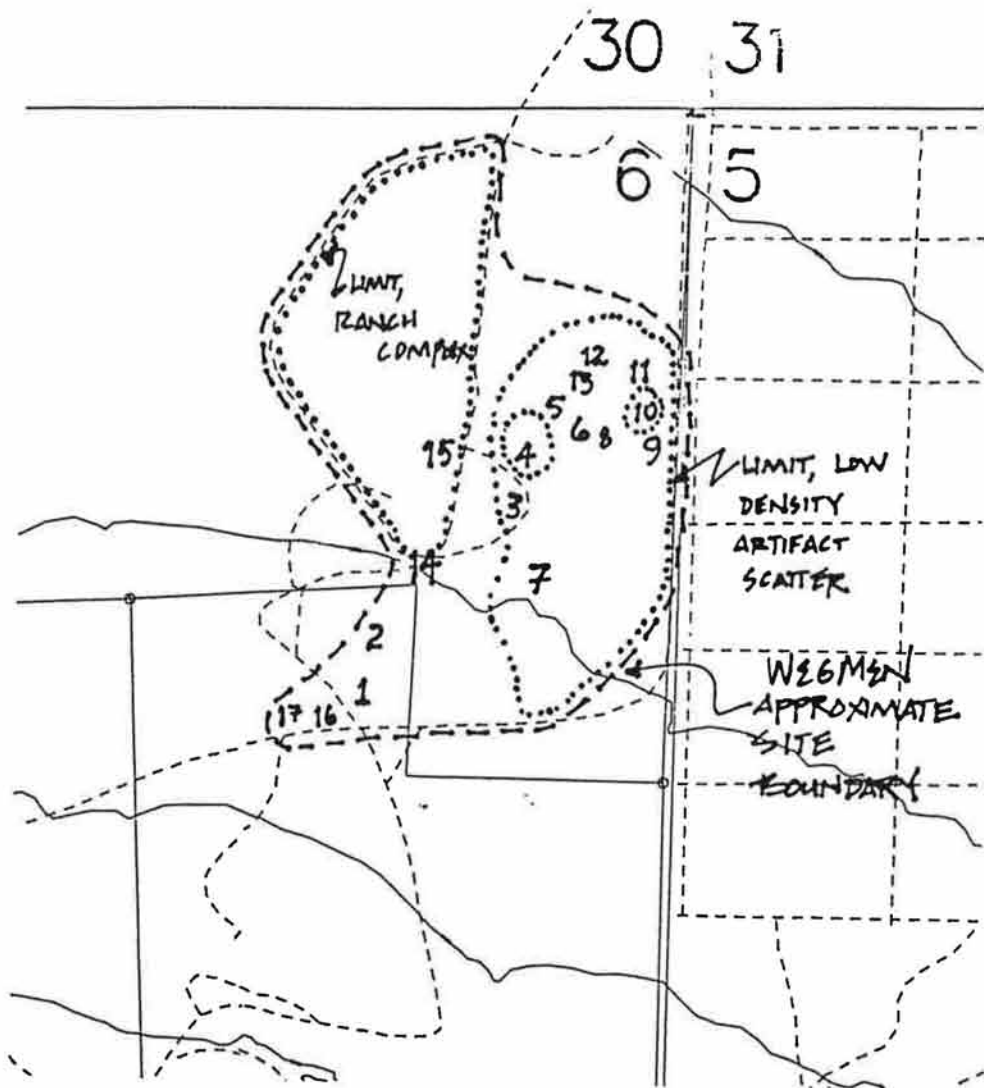
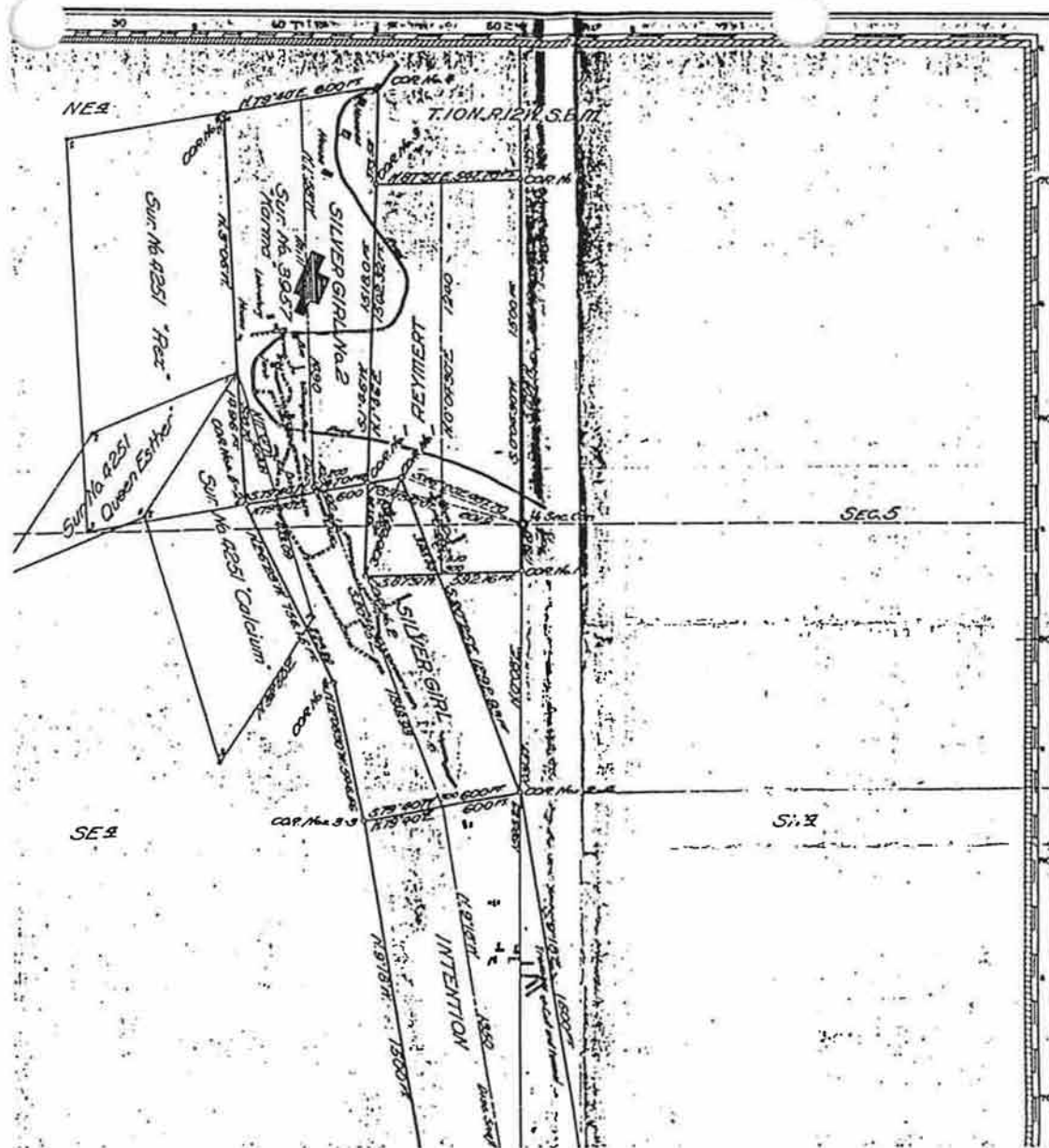


FIGURE 14: Sketch map of Wegmen site complex, CA-KER-4447H. Numbers refer to features listed in Table 3. Scale - 1 : 400.



Mineral Survey No. 6140
 Los Angeles Land District
PLAT
 OF THE CLAIM OF
Engelbert I. Wegman
 KNOWN AS THE
SILVER GIRL, SILVER GIRL No. 2, REY-
MERT AND INTENTION LODES.

IN Mojave MINING DISTRICT,
Kern COUNTY, California
 Containing an area of 400 Acres
 Scale of 400 Feet to the inch
 Variation 16.00 East
 SURVEYED January 26-29, 1933 BY
Julius D. Raso U.S. Mineral Surveyor

The Original Field Notes of the Survey of the Mining Claim from which this plat has been made under my direction, have been examined and approved, and are on file in this Office, and I hereby certify that they contain a true and accurate description of said Mining Claim as well, if incorporated into a patent, serve fully to identify the premises, and that such reference is made thereof to natural objects or permanent monuments as will perpetuate and fix the locus thereof.

I further certify that Five Hundred Dollars worth of labor has been expended, or improvements made upon, or for the benefit of each location embraced in said mining claim by claimant.

That said improvements consist of 3 shafts, 3 trenches, 1 shaft and trench, 2 cuts, 1 tunnel, 2 cuts and tunnels, and a portion of an improvement described as a shaft, drifts, cross cuts, tunnels, stop mine and raise. Value \$252.00

that the location of said improvements is correctly shown upon this plat and that no portion of or interest in said labor or improvements has been included in the estimate of expenditures upon any other claim.

And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

Public Survey Office J. D. Raso

FIGURE 15: 1933 Mineral Survey plat of the Karma mill and property, showing some of the row of houses on the Wegmen site complex.

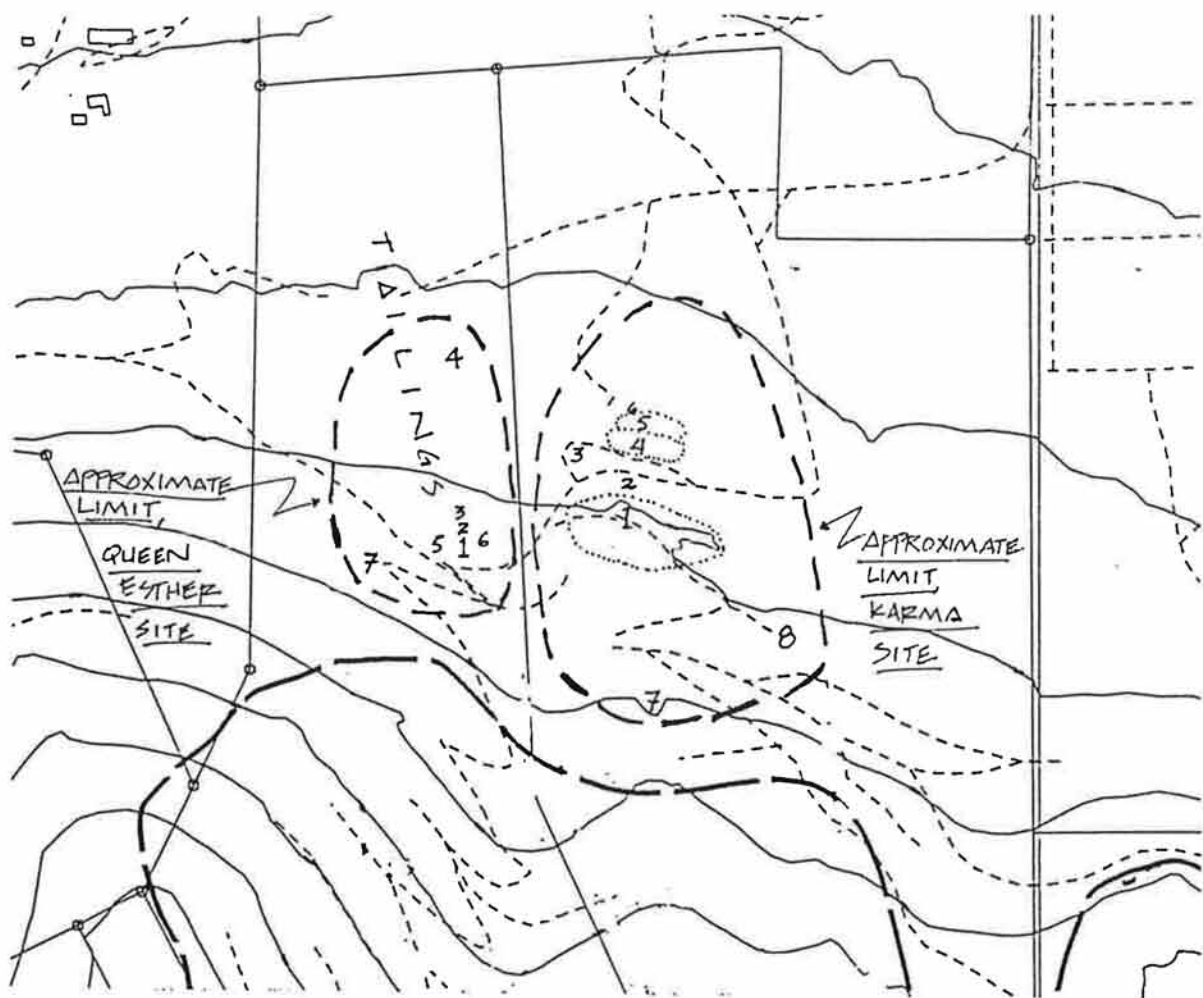


FIGURE 16: Sketch map of Karma and Queen Esther sites, CA-KER-4448H and -4449H. Numbers refer to features listed in Table 4. Scale - 1 : 400.

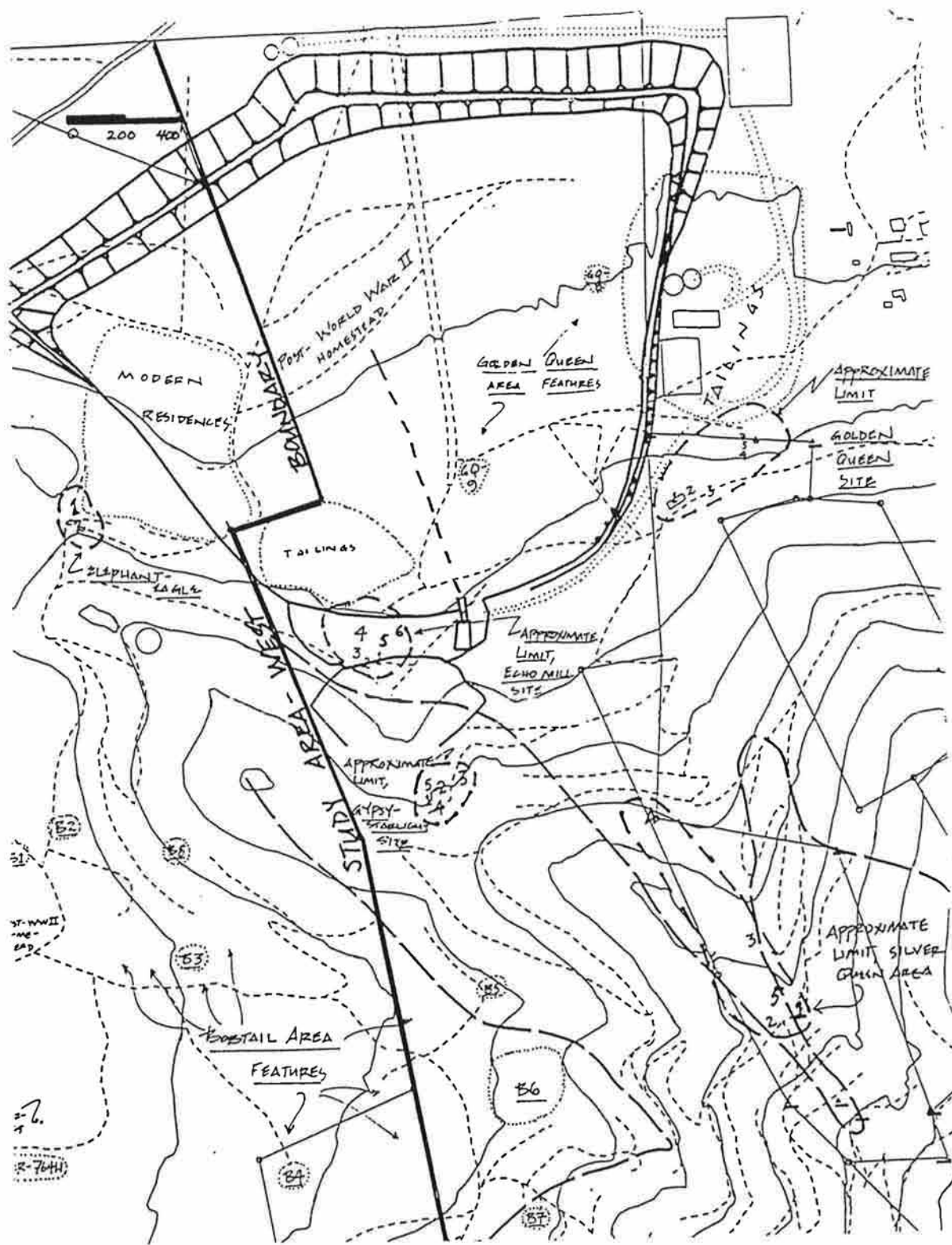


FIGURE 17: Sketch map of the Echo, Golden Queen, Silver Queen, Gypsy Starlight and Bobtail sites. Numbers refer to features listed in Table 5. Scale - 1 : 400.

9.0

APPENDIX A: ARCHIVAL RECORD SEARCH

California

Archaeological

Inventory



FRESNO
KERN
KINGS
MADERA
TULARE

Southern San Joaquin Valley
Information Center
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, California 93311-1099
805/664-2289 FAX 805/664-2415

To: Robert R. Schiffman

(RS# 303)

RE: Golden Queen Mining Co. Project

County: Kern

Map(s): Soledad Mountain 7.5'

The Information Center is under contract to the State Office of Historic Preservation and is responsible for the local management of the California Historical Resources Inventories. The Center is funded solely by research fees, and a grant from the State Office of Historic Preservation. The Information Center does not conduct fieldwork and is not affiliated with any archaeological consultants who conduct fieldwork.

CULTURAL RESOURCES RECORDS SEARCH

The following are the results of a search of the cultural resources site record files at the Southern San Joaquin Valley Information Center. These files include known and recorded archaeological and historic sites, inventory and excavation reports filed with this office, and properties listed on the National Register of Historic Places, the California Historical Landmarks, The California Inventory of Historic Resources, The California Points of Historical Interest and The California Historic Resources Inventory.

The following summarizes the current information available on the subject property based on the records outlined above.

PRIOR CULTURAL RESOURCE INVENTORIES OF THE SUBJECT PROPERTY AND SURROUNDING AREAS

There have been no previous archaeological inventories on the subject property or on the immediately adjacent property. There have been two surveys conducted within one-mile radius of the subject property. Your survey for the Shell Mining Project and a survey done in 1994 by Dorothy Fleagle for Alex Sokolow. According to your map, submitted with your records search request, there was a survey conducted by you in 1988 for Parcel Map # 8686, just southeast of the project area. The report for that survey is not in our files. Please send us a copy of that report so we may incorporate it into our system.

KNOWN CULTURAL RESOURCES ON THE SUBJECT PROPERTY

There are two recorded archaeological sites on the subject property. CA-KER-764H & CA-KER-765. The historic site is a mine related site from the early 1900's. The prehistoric site consists of bedrock milling features. Both were recorded in 1977 by Montizambert & Portillo. It would be advisable to relocate these sites and update the records accordingly.

KNOWN CULTURAL RESOURCES IN THE VICINITY OF THE PROJECT PROPERTY

There are no recorded archaeological sites on the immediately adjacent property. However, there are three recorded sites within a one-mile radius of the project area, (copies of site records are included).

There are no listed properties on the National Register of Historic Places, The California Historical Landmarks, The California Inventory of Historic Resources, California Points of Historical Interest or on the Historical Resources Inventory.

CULTURAL RESOURCE SENSITIVITY OF THE PROJECT PROPERTY

The Soledad Mountain area of Kern County has long been considered to be sensitive for cultural remains, both historic and prehistoric. Mining operations have been ongoing since before the turn of the century.

RECOMMENDATIONS

A field survey should be conducted by qualified archaeologist of the entire project area. An historian that meets Secretary of Interior standards, with experience in evaluating mining-related resources, should be consulted for recommendations and appropriate mitigation measures during the course of the survey.

As mentioned above, CA-KER-764H and CA-KER-765 should be field checked and the records updated to reflect any changes since they were recorded in 1977.

According to William Seidel, archaeologist for the State Office of Historic Preservation, research of written histories and documents relating to this area should be undertaken, and all major features, such as homesteads, mine entrances, shafts, and foundations, etc., should be recorded and assessed for historical and/or archaeological significance. Features of minor value, such as tailings, cairns, glory holes, and minor ditches should be noted on the 523 Primary Record test form. I have enclosed a copy of the form for your convenience.

(RS# 303)

As you are know, any resources 50 years or older should be recorded on the appropriate forms and assessed for historical significance, as mentioned above.

A technical report should be submitted to our office within 30 days of completion of the field survey.

You stated in our phone conversation today, that you had a "very in depth" conversation with William Seidel at The Office of Historic Preservation regarding this project. Any additional recommendations made by Mr. Seidel, if not outlined above, should be implemented.

If you have any questions or comments, please contact me.

By:



Adele Baldwin
Assistant Coordinator

Date: January, 5, 1995

Fee: \$90.00/hr. fee

Invoice #: 5796

10.0

SITE RECORD FORMS AND UPDATES

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: **KER-4446H**
Temp. Designation: Cobble City

Page 1 of 5 .

1. **County:** KERN
2. **USGS Quad:** SOLEDAD MTN. 7.5 **Photorevised:** 1973
3. **UTM Coordinates:** Zone 11: 391550 mE 3872700 mN (middle)
N - 391525/3872900; W - 391425/3872725; E - 391650/3872725;
S - 391500/3872500
4. **Twp.** 10N **Rng.** 12W; NE 1/2 NE 1/4 NE 1/4
Section 6 **Base (Mer)** MDM/SBB
5. **Map coordinates:** 30 mmS 243 mmE 6. **Elevation:** 2890
7. **Location:** On NW side of Soledad Mtn, ~5 miles SW of Mojave, on slope SE of old Golden Queen Tailings
8. **Prehistoric:** **Historic:** XX **Protohistoric:**
9. **Site description:** Mining camp assoc'd w/ Queen Esther Mine & Mill, dating ca. 1900-1910, w/ some Depression era occupation (NE side)
10. **Area:** 430 m (N/S) x 250 m (E/W); 107,500 m².
Method of determination: TAPED & TRANSIT MAPPED
11. **Depth:** Localized thin deposits (privies, house floors, 1 dump); otherwise no depth **Method of Determination:** Subsurface testing
12. **Features:** 31 structures/rooms, 4 pads, 12 privies, 4 dumps/scatters
13. **Artifacts:** Numerous mostly early 1900s; some Depression era, E side
14. **Non-artifactual constituents:** NONE NOTED
15. **Date recorded:** 10/10/95
16. **Recorders:** Whitley and Simon
17. **Affiliation & address:** W&S CONSULTANTS, 2242 STINSON ST, SIMI VALLEY 93065
18. **Human remains:** NONE
19. **Site Integrity:** Good
20. **Nearest water:** NONE
21. **Largest body of water w/in 1 km:** NONE
22. **Vegetation in vicinity:** Creosote scrub
23. **Vegetation on site:** same
References: Munz 1974
24. **Site soil:** sandy colluvium
25. **Surrounding soil:** same
26. **Geology:** Soledad Mtn
27. **Landform:** Mtn slope
28. **Slope:** 0-2%
29. **Exposure:** N
30. **Landowner & address:** Golden Queen Mining Co., Rosamond
31. **Remarks:** Probably assoc'd w/ Queen Esther Mine
32. **References:** Phase I survey of Soledad Mtn & Phase II Test Excavations
33. **Name of project:** as above
34. **Type of investigation:** intensive phase I survey & Phase II test
35. **Site accession no.:** GQ/95- **Curated at:** W&S

CA-KER- 4446H, CONT'D
COBBLE CITY

PAGE 2 OF 5.

36. Photos: Yes

37. Photo accession no.: GQ/CC

Taken by: Whitley

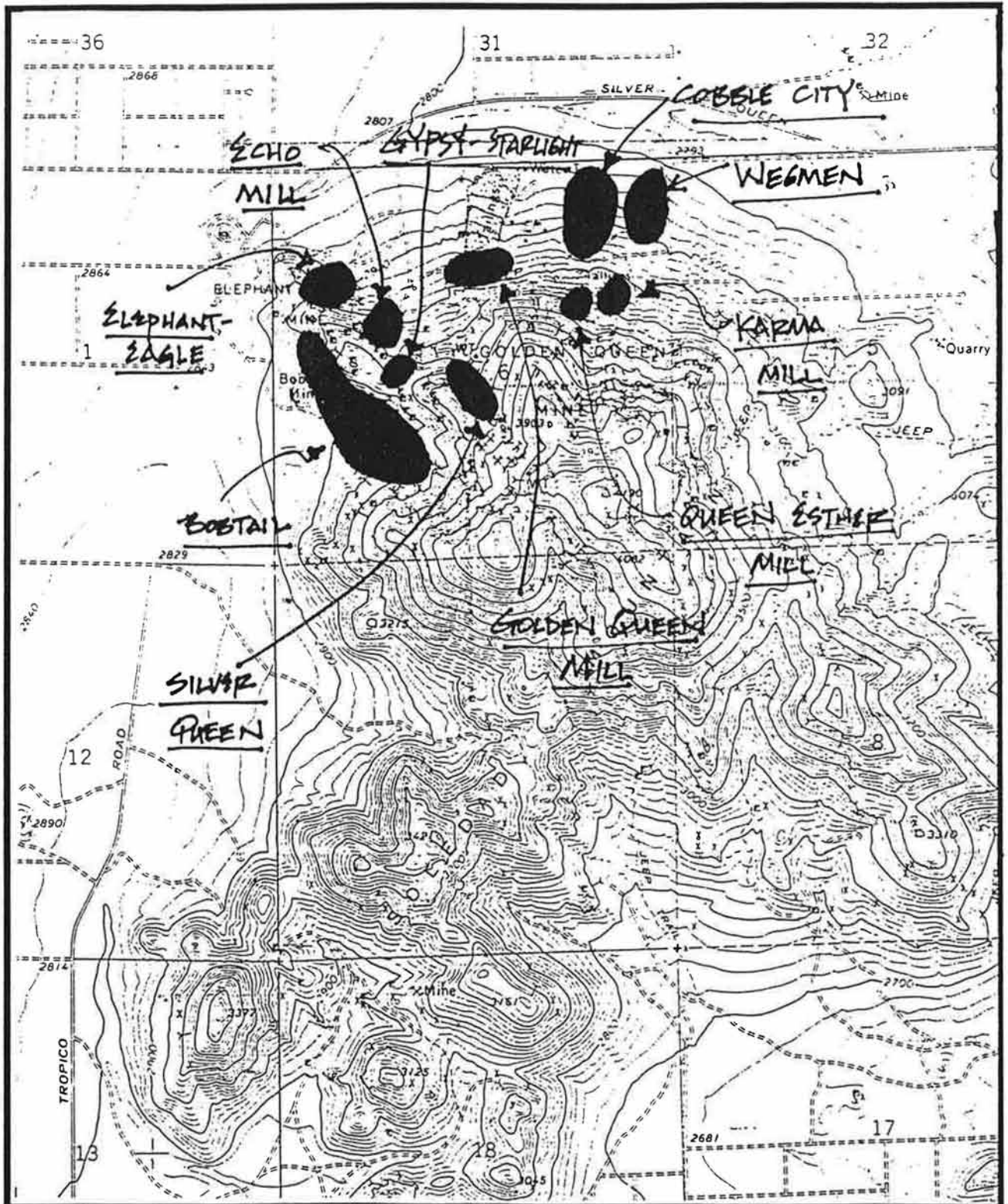
On file at: W&S

SITE LOCATION MAP

CA-KER-_____

age _____ of _____.

USGS TOPO:
SOLEDAD MOUNTAIN
7.5; Scale 1 : 2000



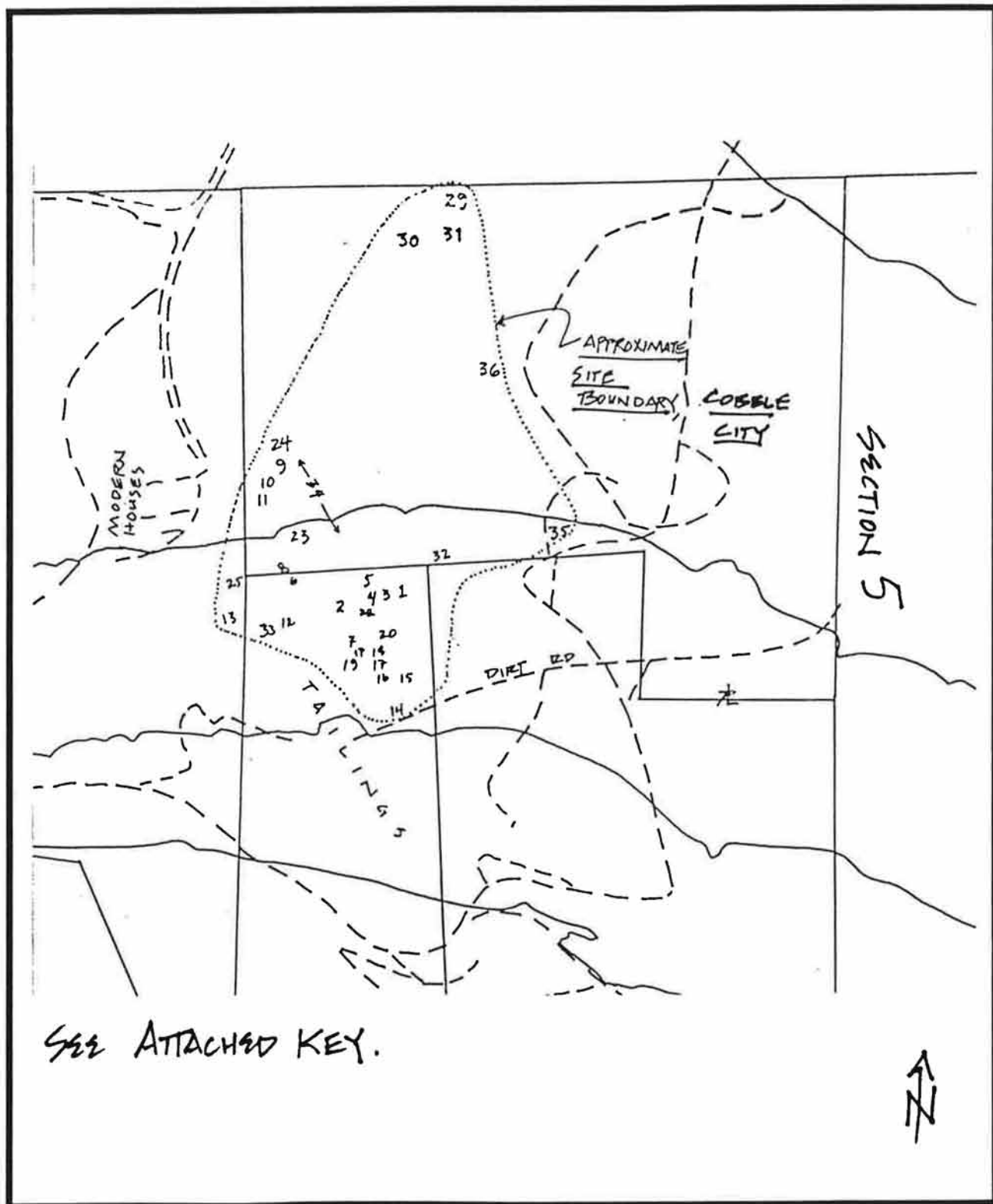
SITE MAP

age 4 of 5

CA-KER- 444614

~~COBBLE~~ CITY,
SKETCH MAP

1" = 400'



FEATURES AT COBBLE CITY (CA-KER- 44464)

PAGE 5 OF 5

Feature #	Description	Size	Comments
1	Cobble structure	4x5m	3 standing walls; burnt; Depression era trash
2	Leveled pad	9x7m	Edged by fieldstone, w/cobble path uphill
3	Cobble structure	6x4m	Burnt; post-1947 trash present
4	Cobble structure	6x4m	Cement plastered; Depression era trash
5	Cobble structure	5x4m	Burnt; Depression era trash
6	Cobble structure	5x3m	Assoc'd w/ #8; terraced
7	Leveled pad	9x4m	Assoc'd w/ #2; edged by cobbles
8	Cobble structure	6x4m	Assoc'd w/ ~1900-1920 remains
9	Cobble structure	4x5m	Partial dug-out; ~1900-1920 artifacts
10	Cobble structure	8x7m	W/ dense artifact scatter; ~1900-1930s
11	Cobble structure	10x7m	2 or 3 room structure; ~1900-1920 artifacts
12	Cobble structure	8x5m	Lg single room, partly buried
13	Cobble structure	4x5m	Interior overgrown w/ plants
14	Cobble structure	4x10m	Lg single room; ~1900-1920 artifacts
15	Cobble structure complex	17x13m	4 abutting bldgs; gabled; burnt; ~1900-1920
16	Cobble structure & dug-out	4x7m	Collapsed; ~1900-1920 artifacts
17	Cobble structure complex	15x18m	8 abutting rooms; ~1900-1920 artifacts
18	Cobble structure complex	10x7m	2 rooms; ~1900-1920 artifacts
19	Leveled pad	11x9m	Lg; ~1900-1920 artifacts; assoc'd w/ #27
20	Cobble structure complex	6x11m	3 rooms + terrace; ~1900-1920 artifacts
21	Cobble structure complex	8x9m	3 rooms + terrace; ~1900-1920 artifacts
22	Dump	10x10m	Small dump near #4; ~1900-1930s
23	Dump	12x10m	Small dump below #8; ~1900-1920
24	Water tanks	20x20m	2, assoc'd w/ collapsed structure & debris
25	Dump	15x15m	Near #33; ~1900-1920 artifacts
26	Privy	2x2m	Assoc'd w/ #17
27	2 Privies	2x2m & 2x2m	Assoc'd w/ #19, on either side of E end
28	Privy	2x2m	Closest to #21
29	Dump	30x30m	Modern, but assoc'd w/ ~1900-1920 scatter
30	Pad & Privy	3x2m & 2x2m	~1900-1920 artifacts; near #29
31	Dump	20x20m	~1900-1920 artifacts
32	Vertical shaft	10x10m	On USGS topo; covered w/ timbers
33	Vertical shaft	10x10m	On USGS topo; covered w/ timbers
34	Water line	500m long (?)	Runs from #24 to Queen Esther
35	Cobble fdn & shaft	20x20m	Near Wegmen House
36	Level pad	5x3m	Edged w/ cobble, ~1900-1920

(FEATURE LOCATIONS ON SITE SKETCH MAP)

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: *KER-4447H*
Temp. Designation: Wegmen

Page 1 of 5

1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: 391775 mE 3872750 mN (middle)
N - 391800/3872850; W - 391700/3872725; E - 391875/3872725
S - 391750/3872600
4. Twp. 10N Rng. 12W; MIDDLE 1/4 NE 1/4 NE 1/4 NE 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 30 mmS 243 mmE 6. Elevation: 2850
7. Location: On NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: Early 1900s - Modern Mining camp/homestead
10. Area: 345 m (N/S) x 345 m (E/W); 84,525 m².
Method of determination: TAPED & TRANSIT MAPPED
11. Depth: Varies: present in privies & dumps; otherwise none
Method of Determination: Subsurface Testing
12. Features: 14 structures, 3 pads, 9 privies, 3 dumps + modern ranch
13. Artifacts: Numerous early 1900s - Depression era - modern artifacts
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI
VALLEY 93065
18. Human remains: NONE
19. Site Integrity: Fair to poor; much Depression & later re-use of early
remains
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-2% 29. Exposure: N
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Probably "Soledad City", orig. assoc'd w/ Karma Mine. Ranch
occup'd until 1991. Combined w/ Depression era use, has resulted in poor
condition of many features. Homestead owned/occupied by Wegmen family.
32. References: Phase I survey of Soledad Mtn & Phase II Test Excavations
33. Name of project: as above
34. Type of Investigation: Intensive phase I survey & Phase II test

CA-KER- 4447H, CONT'D
Wegmen site

35. Site accession no.: GQ/95-

36. Photos: Yes

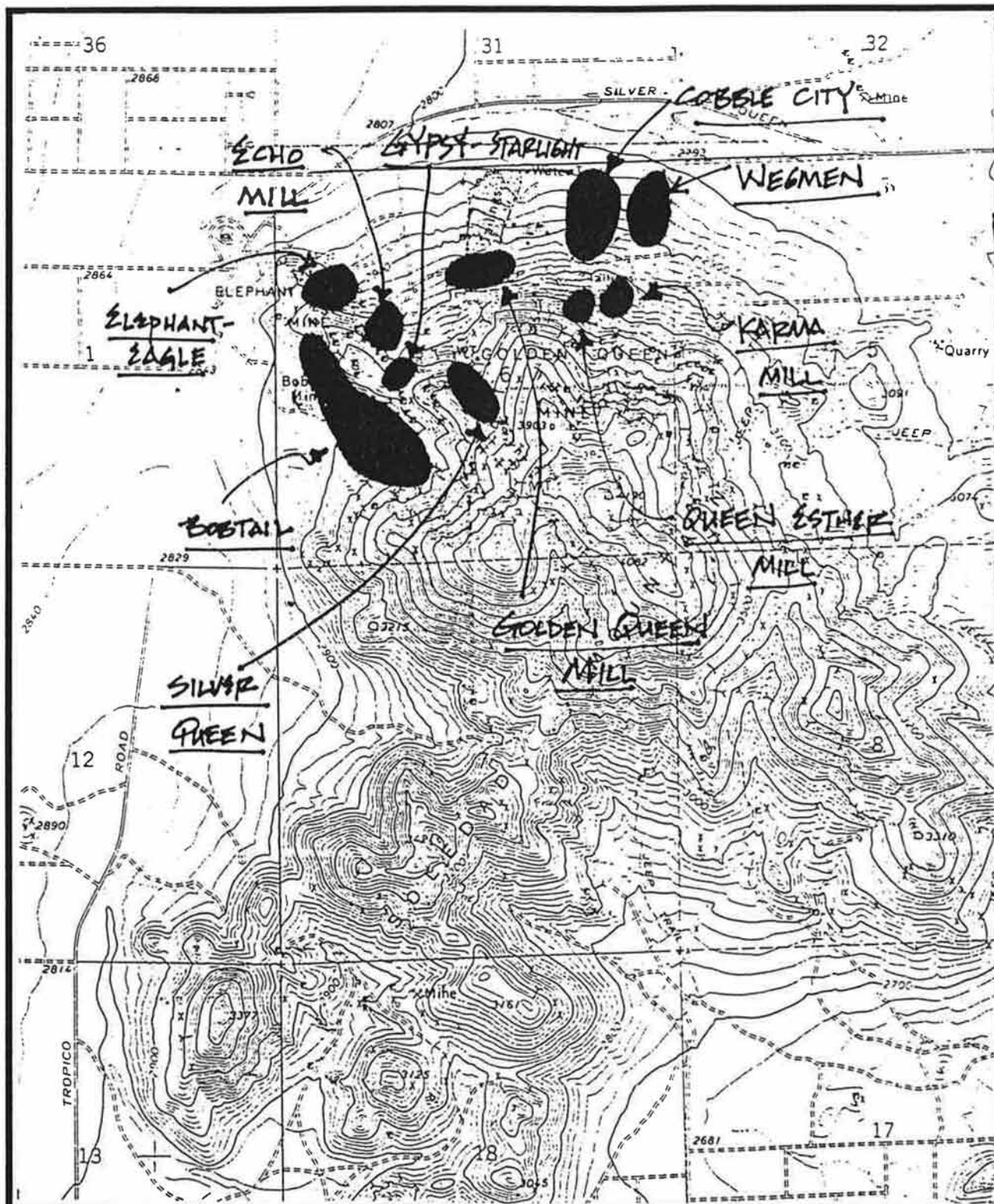
37. Photo accession no.: GQ

Curated at: W&S

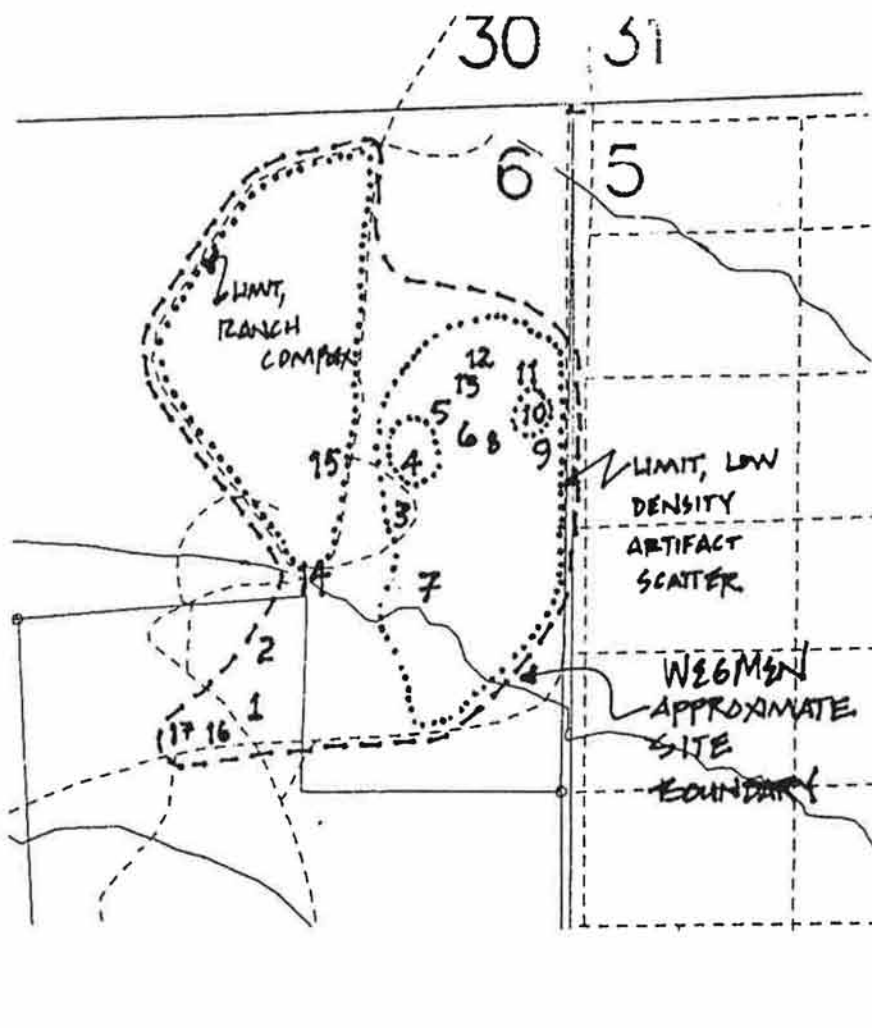
Taken by: Whitley

On file at: W&S

USGS TOPO:
SOLEDAD MOUNTAIN
7.5; Scale 1 : 2000



WEGMEN SITE Complex
SKETCH MAP
1" = 400'



(SEE ATTACHED KEY TO FEATURE #s)

FEATURES ON THE WEGMEN SITE COMPLEX

PAGE 5 OF 5.

Feature #	Description	Size	Comments
	Standing woodframe house	10x15m	Single-story, gable front, board & batten shake & tin roof, 3 rooms, w/ assoc'd Depression era trash & artifacts
2	Fallen wood structure	7x15m	Probably house similar to #1
3	Standing 3-hole privy	4x3m	Standing 2 room, 3-hole privy, wood constr.
4	Dump	30x45m	Turn-of-century artifacts
5	Vertical shaft & headframe	20x20m	Reymert Fraction (modern)
6	Collapsing wood structure	7x5m	1 room w/ ~1900-1920 artifacts
7	Board & batten cabin	3x4m	1 room, no roof, ~1900-1920 artifacts
8	Timber & artifact pile	5x5m	Collapsed wood structure?
9	Wood structure	10x6m	Collapsed, assoc'd w/Depression era remains
10	Dump - Depression era	9x20m	Prob. assoc's w/ #9
11	Collapsed wood structure	8x12m	On terraced pad; age ?
12	Cobble foundation	6x10m	Assoc'd w/ 1910-1930s cans
13	Vertical shaft & dug-out (?)	10x10m	Assoc'd w/ #5 (?)
14	Wegmen house complex	---	Wood-sided frame w/ stucco addition, occupied to 1991; 5 assoc'd outbldgs
15	Meehl house complex (ranch)	---	Wood-sided house occupied to 1991, w/ misc ranch outbldgs, incl barn made of RR ties, concrete-bottomed pig-sties, corrals, etc.
16	Collapsed structure	15x6m	Cobble foundation w/ fallen timbers
17	Privies	2x2m each	2 assoc'd w/ #16

(FEATURES SHOWN ON SITE SKETCH MAP)

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: *KER-4440H*
Temp. Design: Karma Mill

Page 1 of 4

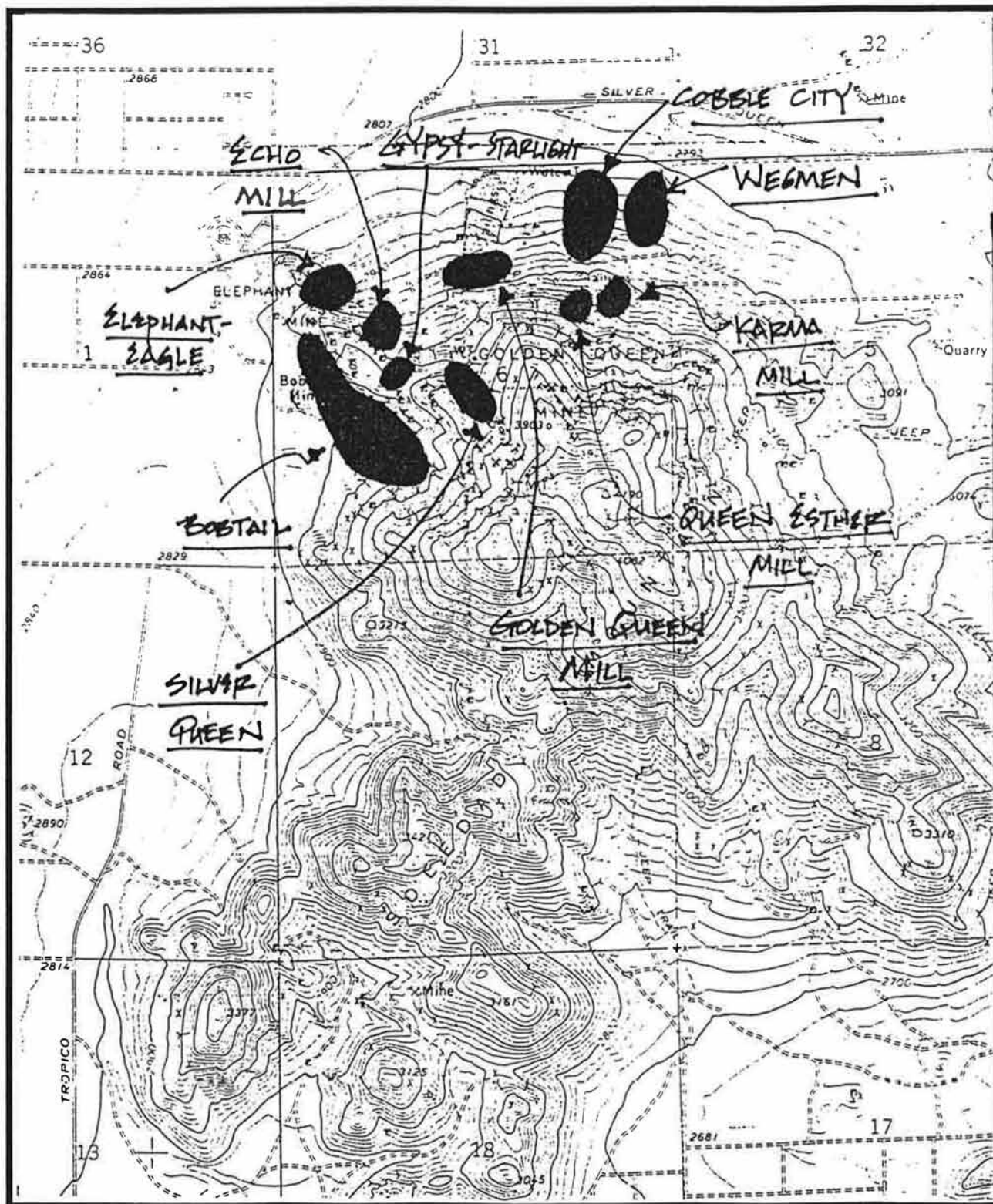
1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: 391625 mE 3872350 mN
4. Twp. 10N Rng. 12W; NW 1/4 NW 1/4 SE 1/4 NE 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 47 mmS 236 mmE 6. Elevation: 3090
7. Location: On NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: 1900-1910 gold mill
10. Area: 125 m (N/S) x 125 m (E/W); 15,625 m².
Method of determination: TAPED & TRANSIT MAPPED
11. Depth: Localized in a few spots (assay dump); otherwise none
Method of Determination: Subsurface testing
12. Features: Hoist house, headframe & related structures & features; assay office dump; mill foundations & 20 stamp mill; furnace.
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI VALLEY 93065
18. Human remains: NONE
19. Site integrity: Moderate. Hoist house & headframe intact (though modified by later use). Mill burnt down & only foundation remains.
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-2% 29. Exposure: N
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Mill burnt in 1930s but used 1900-1910. owned by Wegmens.
32. References: Phase I survey of Soledad Mtn & Phase II Test Excavations; see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines Report 31:465-85.
33. Name of project: as above
34. Type of investigation: Intensive phase I survey & Phase II test
35. Site accession no.: GQ/95- Curated at: W&S
36. Photos: Yes Taken by: Whitley
37. Photo accession no.: GQ On file at: W&S

SITE LOCATION MAP

CA-KER-_____

Page _____ of _____.

USGS TOPO:
SOLEDAD MOUNTAIN
7.5; Scale 1 : 2000



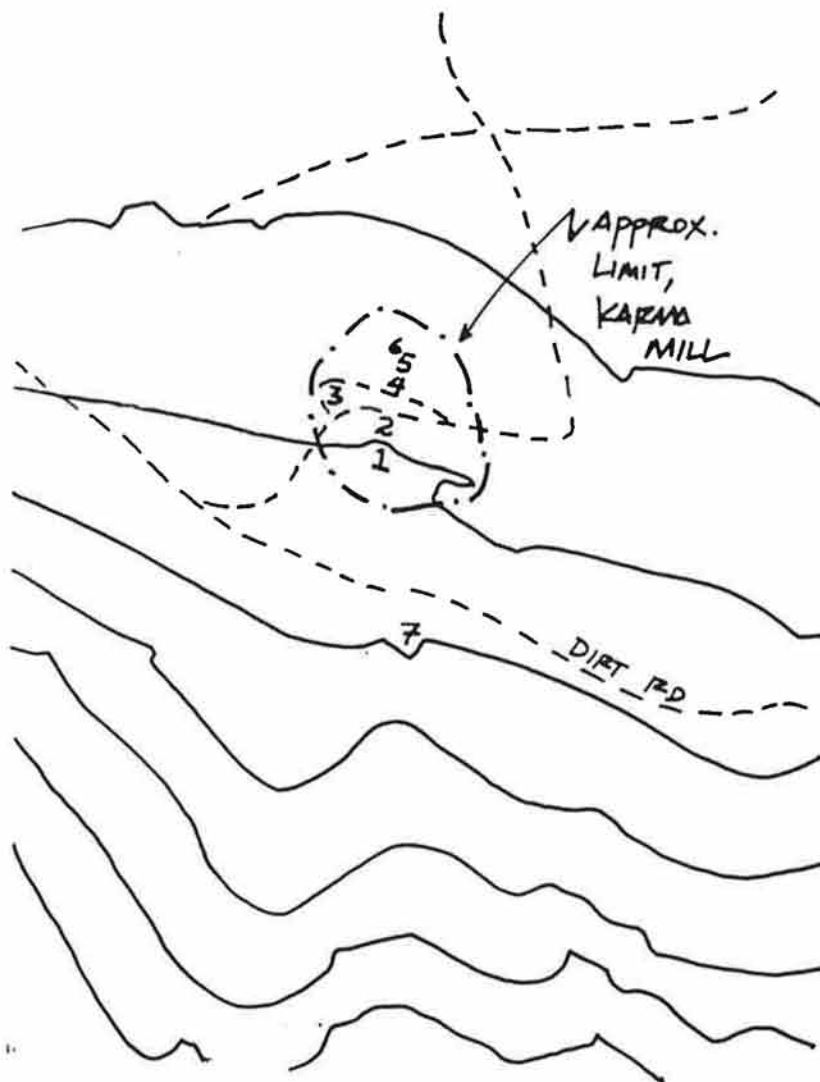
SITE MAP

Page 3 of 4.

CA-KER-4448H

KARMA MILL
SKETCH MAP

1" : 400'



(SEE ATTACHED FEATURE KEY)

FEATURES AT KARMA Mill

PAGE 4 OF 4.

Feature # Description

Comments

KARMA MILL & MINE

1	Headframe, Hoist house, Haulage adit, etc	Early 20th century + later additions
2	Ore chute & jaw crusher	Depression era
3	Assay office	Early 20th century
4	Stamp mill area	Foundation & stamps only; Early 20th century
5	Tank area	Foundations
6	Retort (?)	
7	Glory hole	

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: *KER-4449H*
Temp. Design: Queen Esther Mill

Page 1 of 4 .

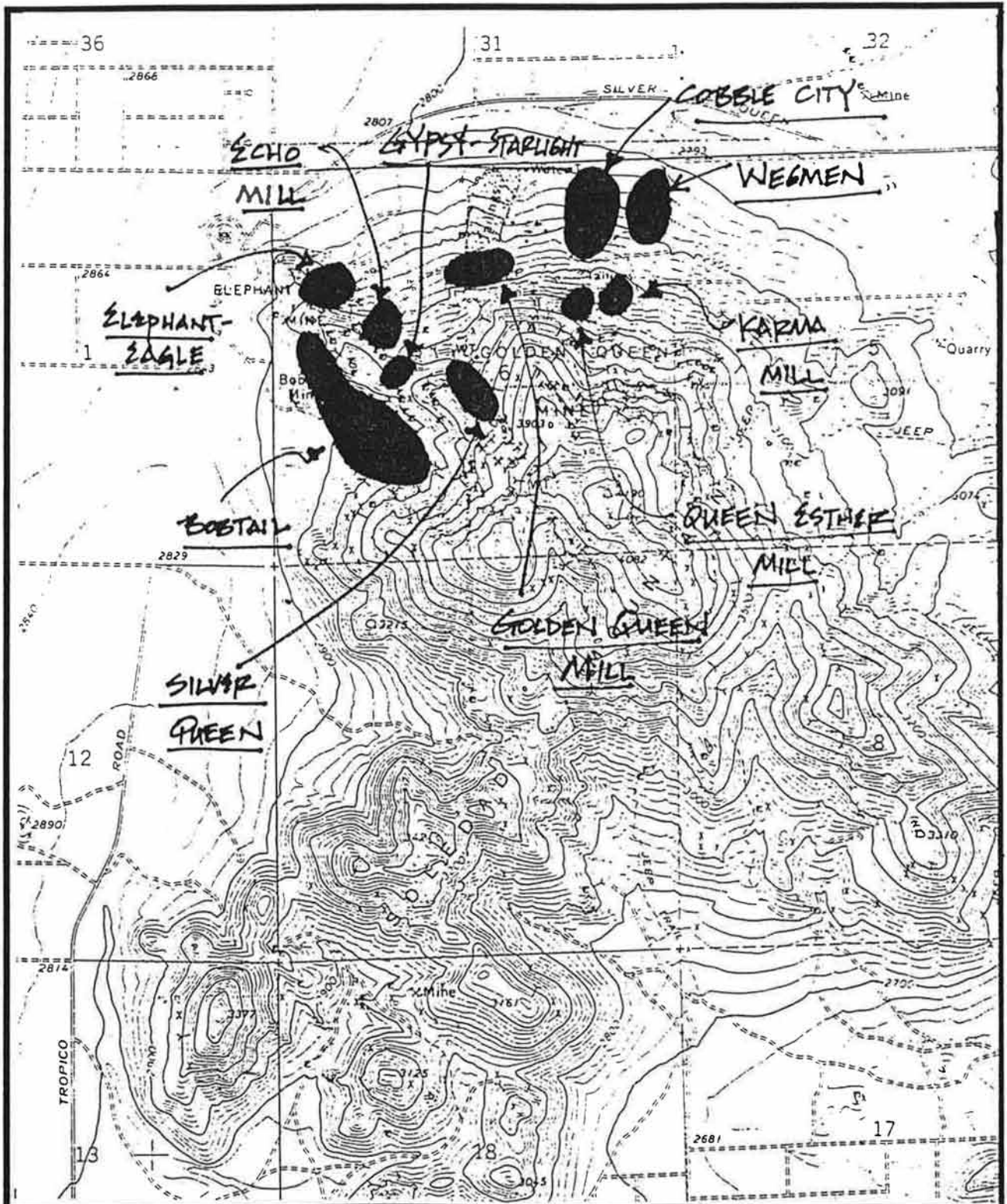
1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: 391475 mE 3872325 mN
4. Twp. 10N Rng. 12W; NE 1/4 NE 1/4 SW 1/4 NE 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 49 mmS 231 mmE 6. Elevation: 3100
7. Location: On NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: ~1900-1910 gold mill
10. Area: 125 m (N/S) x 125 m (E/W); 15,625 m².
Method of determination: TAPED & TRANSIT MAPPED
11. Depth: none Method of Determination: Subsurface Probing
12. Features: Mill structure, assay office, 2 collapsing wood structures,
misc. tank foundations, machine shop dump, tar stockpiles
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI
VALLEY 93065
18. Human remains: NONE
19. Site Integrity: Poor. Mill near collapse (dangerous); tanks salvaged and
removed historically. Tailings starting to cover much of lower portion of
site (incl 3 wood structures)
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-2% 29. Exposure: N
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Construction of mill appears intentionally haphazard.
32. References: Phase I survey of Soledad Mtn & Phase II Test Excavations;
see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines
Report 31:465-85.
33. Name of project: as above
34. Type of Investigation: intensive phase I survey & Phase II test
35. Site accession no.: GQ/95- Curated at: W&S
36. Photos: Yes Taken by: Whitley
37. Photo accession no.: GQ On file at: W&S

SITE LOCATION MAP

CA-KER-_____

Page _____ of _____.

USGS TOPO:
SOLEDAD MOUNTAIN
7.5; Scale 1 : 2000

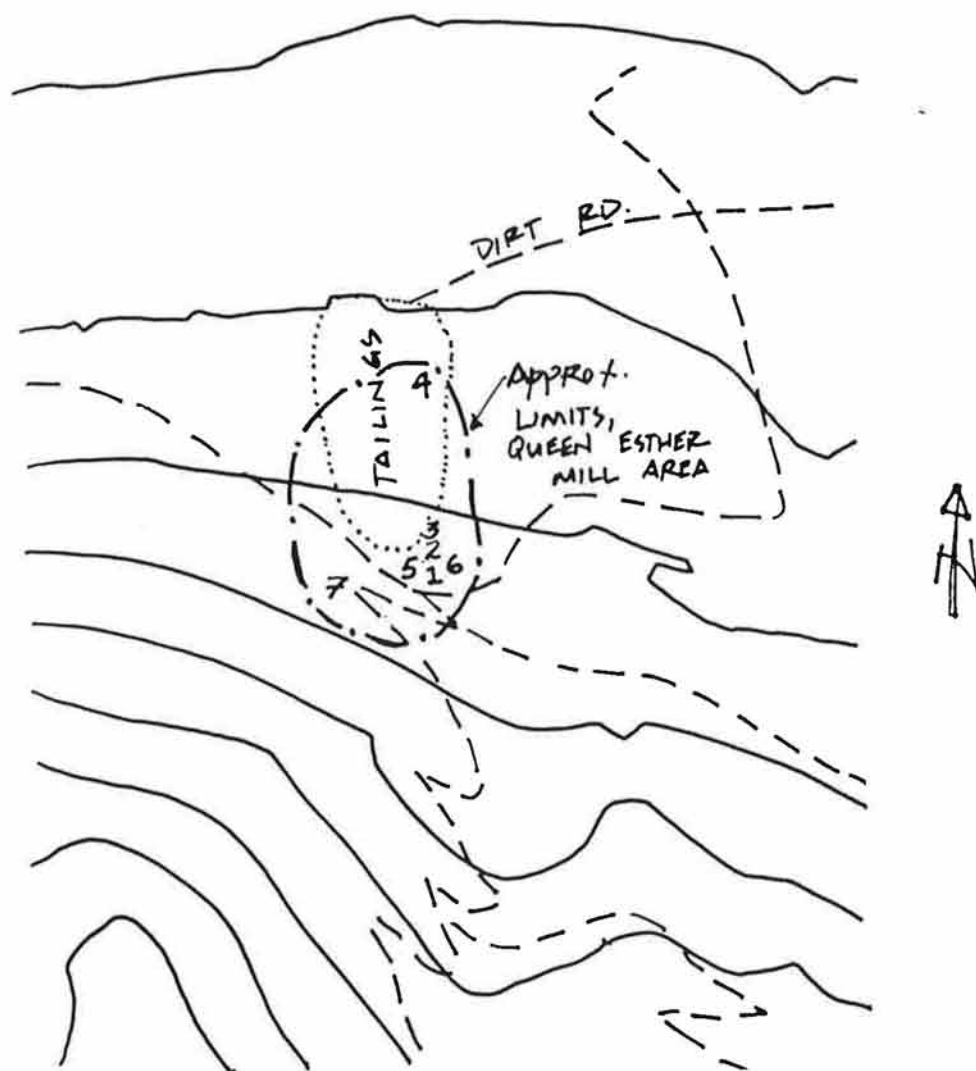


SITE MAP

age 3 of 4.

CA-KER- 44491-1

QUEEN ESTHER MILL AREA
SKETCH MAP
1" : 400



(SEE ATTACHED KEY FOR FEATURE DESCRIPTIONS)

FEATURES AT QUEEN ESTHER MILL

Feature #	Description	Comments
QUEEN ESTHER MINE & MILL		
1	Mill structure	Collapsing
2	Assay lab	Filling with tailings
3	Wood structure	Collapsed
4	Wood structure	Buried by tailings
5	Tank foundation	
6	Dump & Asphalt work area	Tar barrels and piles
7	Ore haulage ramp	Depression era (?)

(See SKETCH Map FOR FEATURE LOCATIONS).

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: *KER-4450H*
Temp. Design: Echo Mill

Page 1 of 5 .

1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: ³910675 mE ³⁸72250 mN
4. Twp. 10N Rng. 12W; NW 1/4 NW 1/4 SE 1/4 NW 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 52 mmS 197 mmE 6. Elevation: 3020
7. Location: On NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: Early 1900s gold mill, & some Depression era remains
10. Area: 100 m (N/S) x 185 m (E/W); 18,500 m².
Method of determination: TAPED & TRANSIT MAPPED
11. Depth: Localized (privy, assay office dump), otherwise none
Method of Determination: Subsurface Testing
12. Features: haulage level adit + Depression era bldg fdn; early 1900s mill
bldg fdn; assay office dump; 1 structure pad; 1 privy; tailings
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI
VALLEY 93065
18. Human remains: NONE
19. Site Integrity: Poor. Mill dismantled in 1906. Area reworked in 1930s
by Golden Queen; area heavily disturbed.
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-2% 29. Exposure: N
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Mill operated 1890s-1905, then closed in 1906. Mine adits
worked by Golden Queen in 1930s; possible changing room fdn at haulage
level from this time. W/exception of assay office dump & 1 privy, very
little extant remains here
32. References: Phase I survey of Soledad Mtn & Phase II Test Excavations;
see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines
Report 31:465-85.
33. Name of project: as above
34. Type of investigation: intensive phase I survey & Phase II test

CA-KER- 4450H, CONT'D
ECHO MILL

35. Site accession no.: GQ/95-

36. Photos: Yes

37. Photo accession no.: GQ

Curated at: W&S

Taken by: Whitley

On file at: W&S

SITE LOCATION MAP

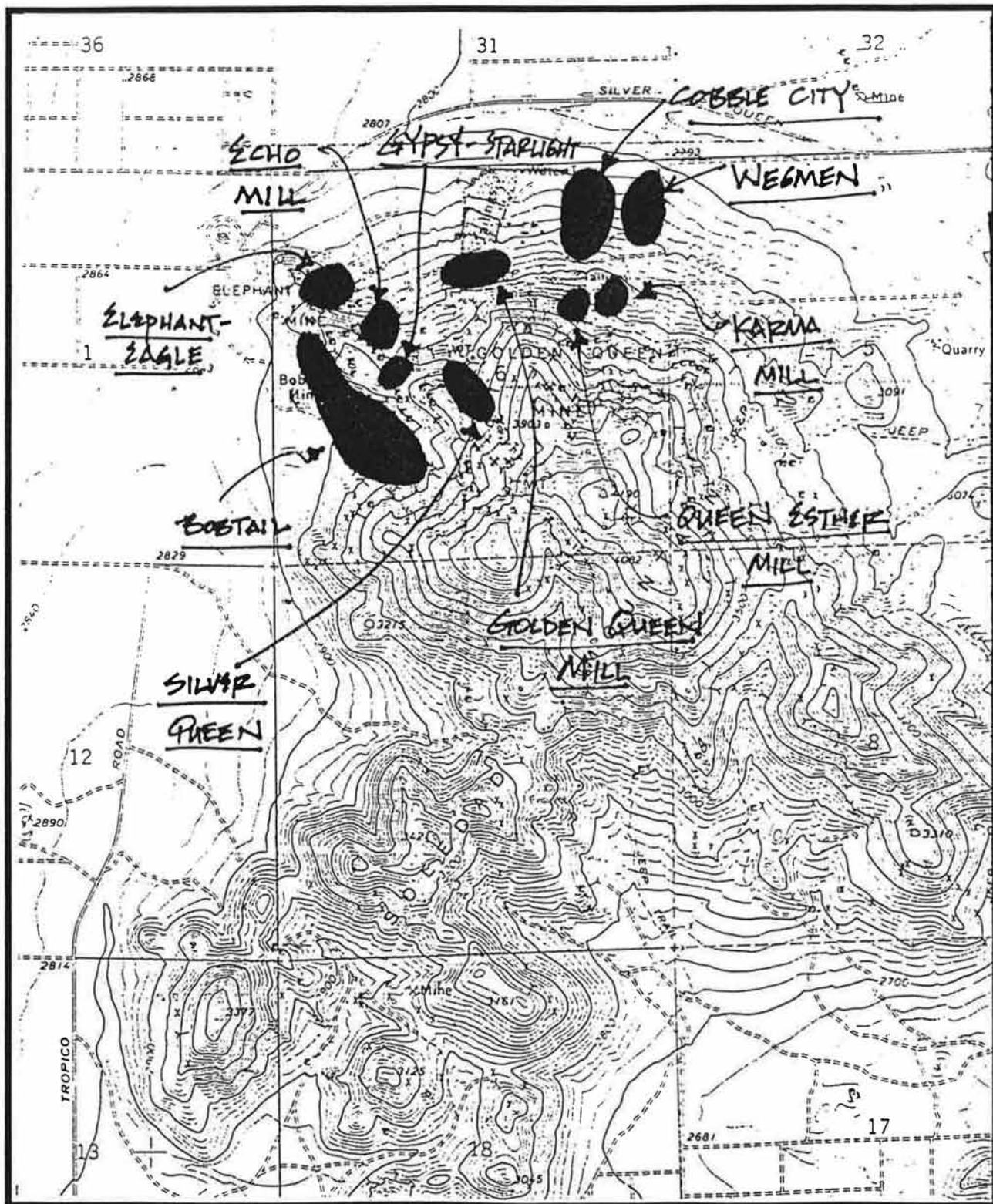
CA-KER-_____

age _____ of _____.

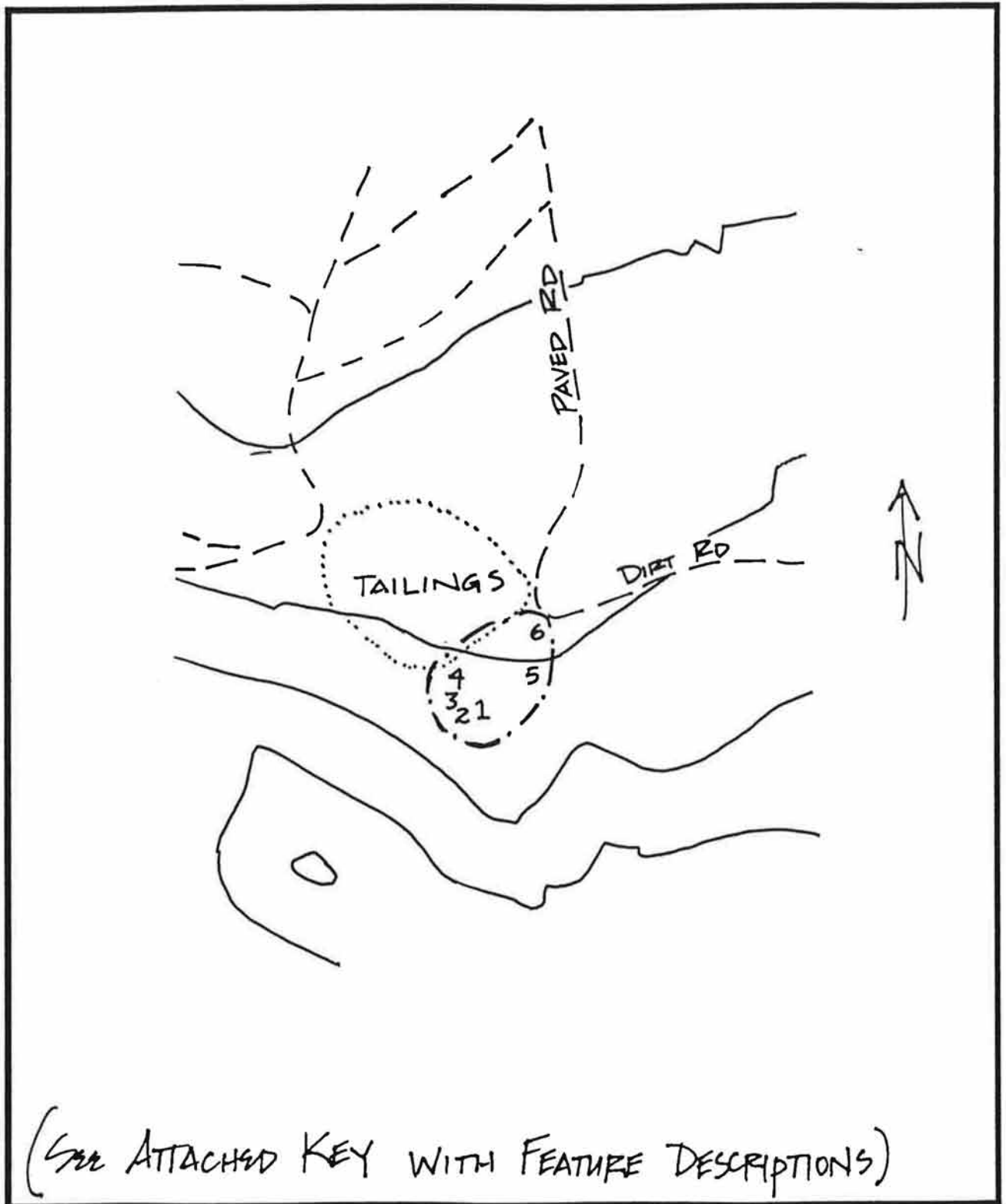
USGS TOPO:

SOLEDAD MOUNTAIN

7.5; Scale 1 : 2000



ECHO MILL AREA
SKETCH MAP
1" = 400'



(SEE ATTACHED KEY WITH FEATURE DESCRIPTIONS)

SITE FEATURES

PAGE 5 of 5.

FEATURE # DESCRIPTION

Echo Mill

- | | |
|---|------------------------|
| 1 | Metal structure |
| 2 | Haulage level (?) adit |
| 3 | Concrete foundation |
| 4 | Stamp mill foundations |
| 5 | Assay office dump |
| 6 | Privy |

COMMENTS

Modern

Changing house (?); Depression era (?)

Early 20th century

Disturbed

ECHO MILL SITE AREA.

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

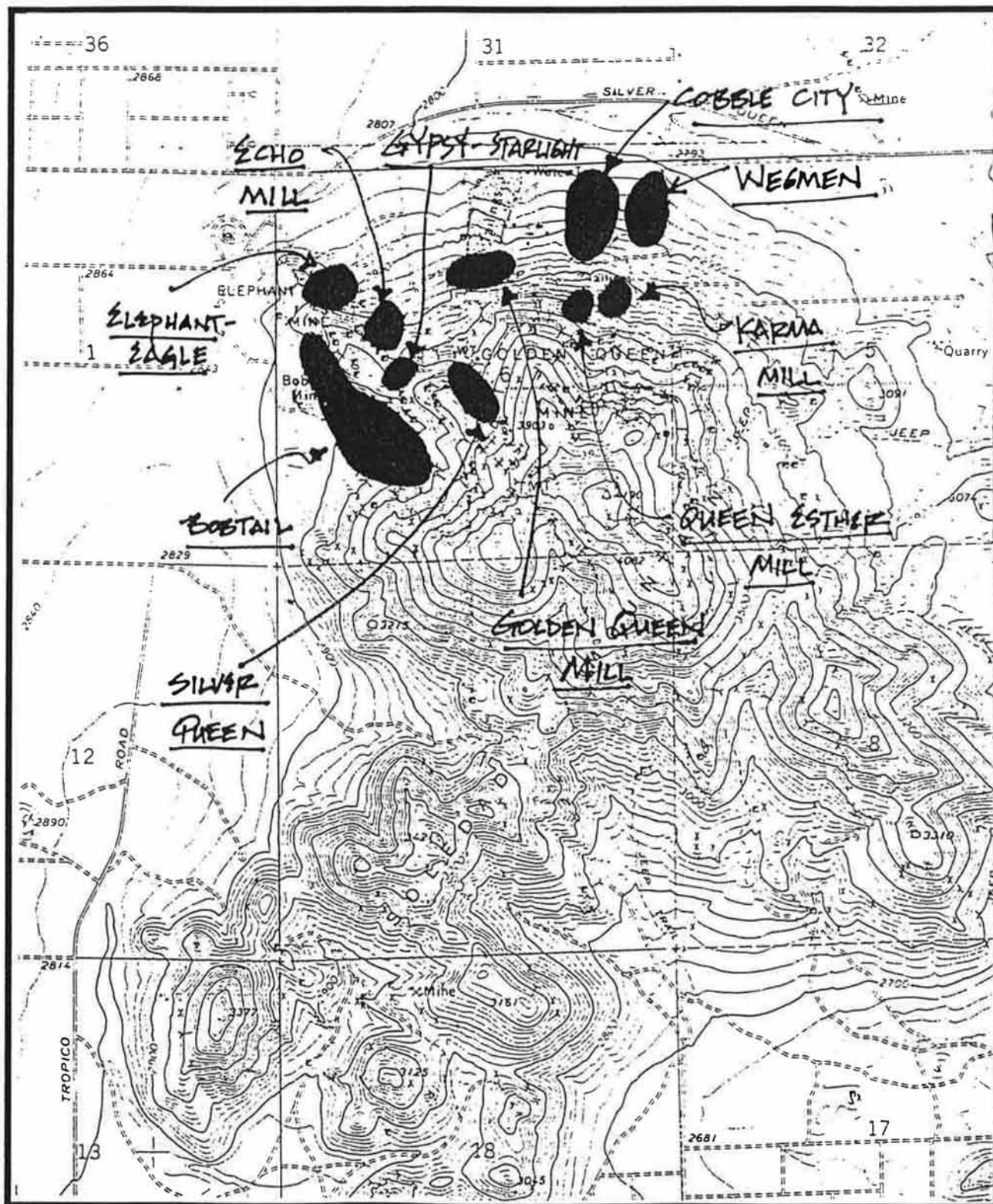
Permanent Trinomial: 4451 H
Temp. Design: Golden Queen Mill

Page 1 of 4

1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: 391075 mE 3872425 mN
4. Twp. 10N Rng. 12W; Middle 1/4 SE 1/4 NE 1/4 NW 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 42 mmS 212 mmE 6. Elevation: 2950
7. Location: On NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: Depression era gold
10. Area: 100 m (N/S) x 185 m (E/W); 18,500 m².
Method of determination: TAPED & TRANSIT MAPPED
11. Depth: none Method of Determination: Subsurface Testing
12. Features: Concrete structure fdns; 5 metal tanks; 1 standing structure;
haulage level adit; massive tailings; 2 Oliver drum filters, etc.
13. Artifacts: Misc. Depression era & later artifacts
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI
VALLEY 93065
18. Human remains: NONE
19. Site Integrity: Poor. Mill was dismantled and apparently burnt.
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-2% 29. Exposure: N
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Mill started in 1935, owned by Gold Fields of South Africa
Mining Corporation; dismantled ca. 1950.
32. References: Phase I survey of Soledad Mtn & Phase II Test Excavations;
see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines
Report 31:465-85.
33. Name of project: as above
34. Type of investigation: intensive phase I survey & Phase II test
35. Site accession no.: GQ/95- Curated at: W&S
36. Photos: Yes Taken by: Whitley
37. Photo accession no.: GQ On file at: W&S

Page ____ of ____

7.5; Scale 1 : 2000

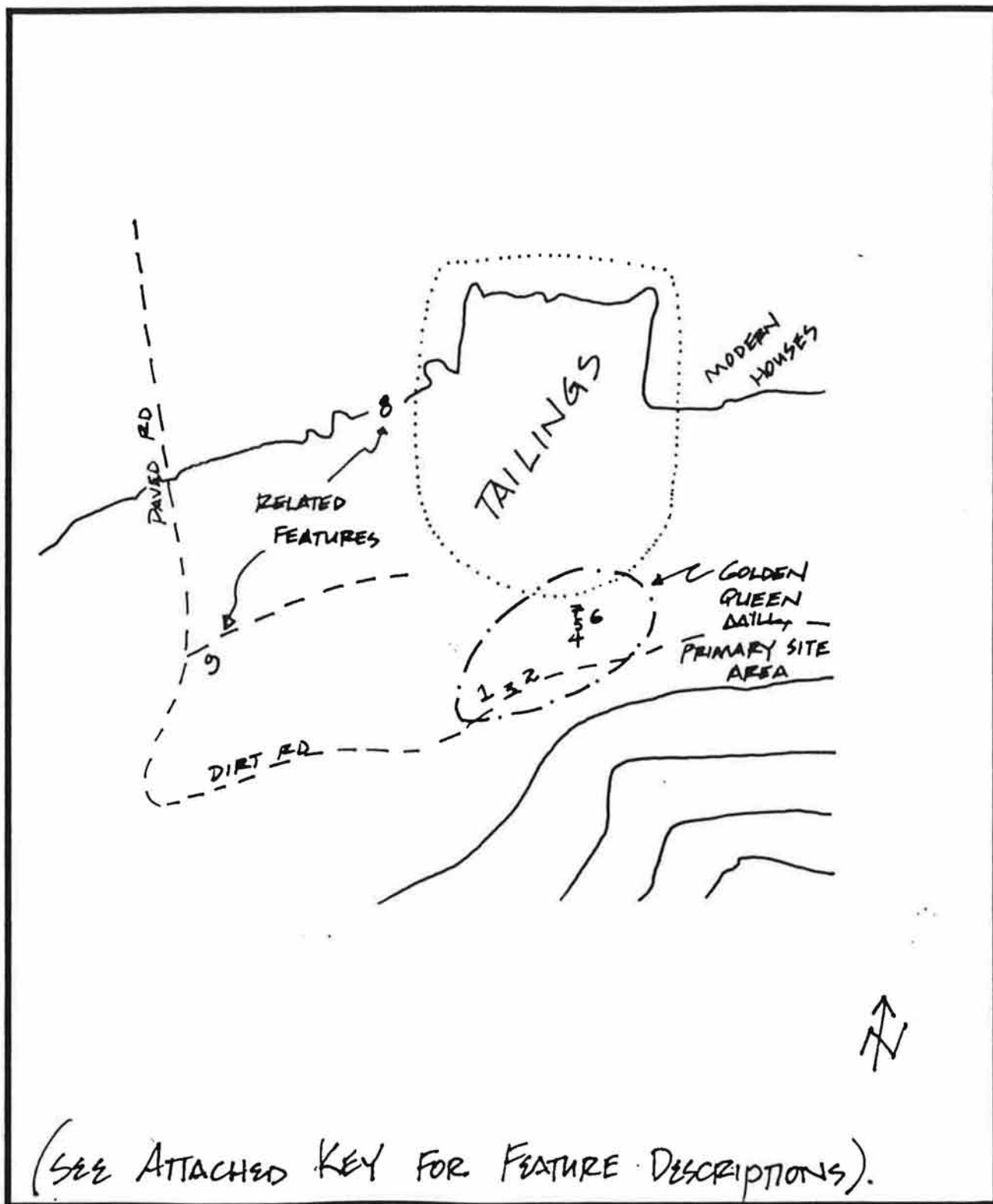


SITE MAP

CA-KER- 4451 H

Page 3 of 4

GOLDEN QUEEN MILL
(1935-1950)
SKETCH MAP
1" = 400'



SITE FEATURES

PAGE 4 OF 4.

FEATURE # DESCRIPTION

COMMENTS

Golden Queen Mill

1	Metal Building	Modern
2	Concrete foundation	Depression era (?)
3	Haulage level adit	
4	Concrete mill foundation	Remnants only; Depression era
5	5 Agitator vats	Depression era
6	Concrete & wood bldg	Shop structure (?); Depression era
7	2 Oliver drums	3rd drum ca. 200 m downslope
8	Pad & prospect	Depression era
9	Concrete structure	5x6 m, 1 room; Depression era (?)

(SEE ATTACHED SKETCH MAP FOR FEATURE LOCATIONS)

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: *KER-4452H*
Temp. Design: Silver Queen

Page 1 of 4 .

1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: 391050 mE 3871975 mN
4. Twp. 10N Rng. 12W; SW 1/4 NE 1/4 NE 1/4 SW 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 63 mmS 213 mmE 6. Elevation: 3350
7. Location: On NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: Depression era & later mining remains
10. Area: 430 m (N/S) x 50 m (E/W); 21,500 m².
Method of determination: TAPED & TRANSIT MAPPED
11. Depth: none Method of Determination: Subsurface Probing
12. Features: 1 truck chute, collapsed wood frame structure, concrete adit portal, privy (modern?), large waste rock pile, + misc. concrete compressor/machine fdns.
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI VALLEY 93065
18. Human remains: NONE.
19. Site Integrity: Poor. Wood structure has collapsed. Few assoc'd artifacts.
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-2% 29. Exposure: N
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Most of remains probably post-Depression era, as appears to post-date Golden Queen; therefore likely 1950s era minor mining operation
32. References: Class III inventory, Soledad Mtn; see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines Report 31:465-85.
33. Name of project: as above
34. Type of Investigation: Class III Inventory
35. Site accession no.: Curated at:
36. Photos: Yes Taken by: Whitley
37. Photo accession no.: GQ On file at: W&S

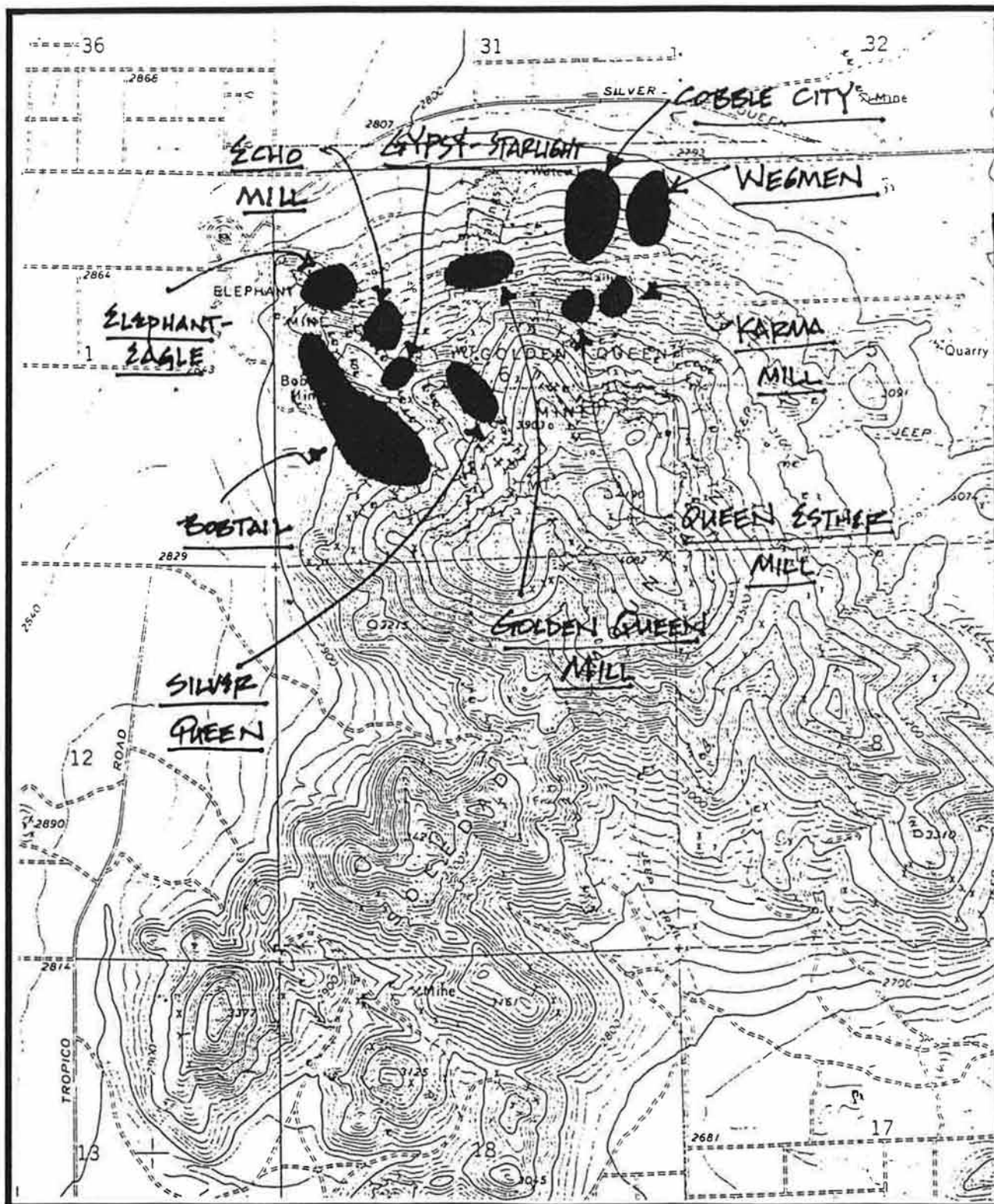
SITE LOCATION MAP

CA-KER-_____

USGS TOPO:

SOLEDAD MOUNTAIN

7.5; Scale 1 : 2000



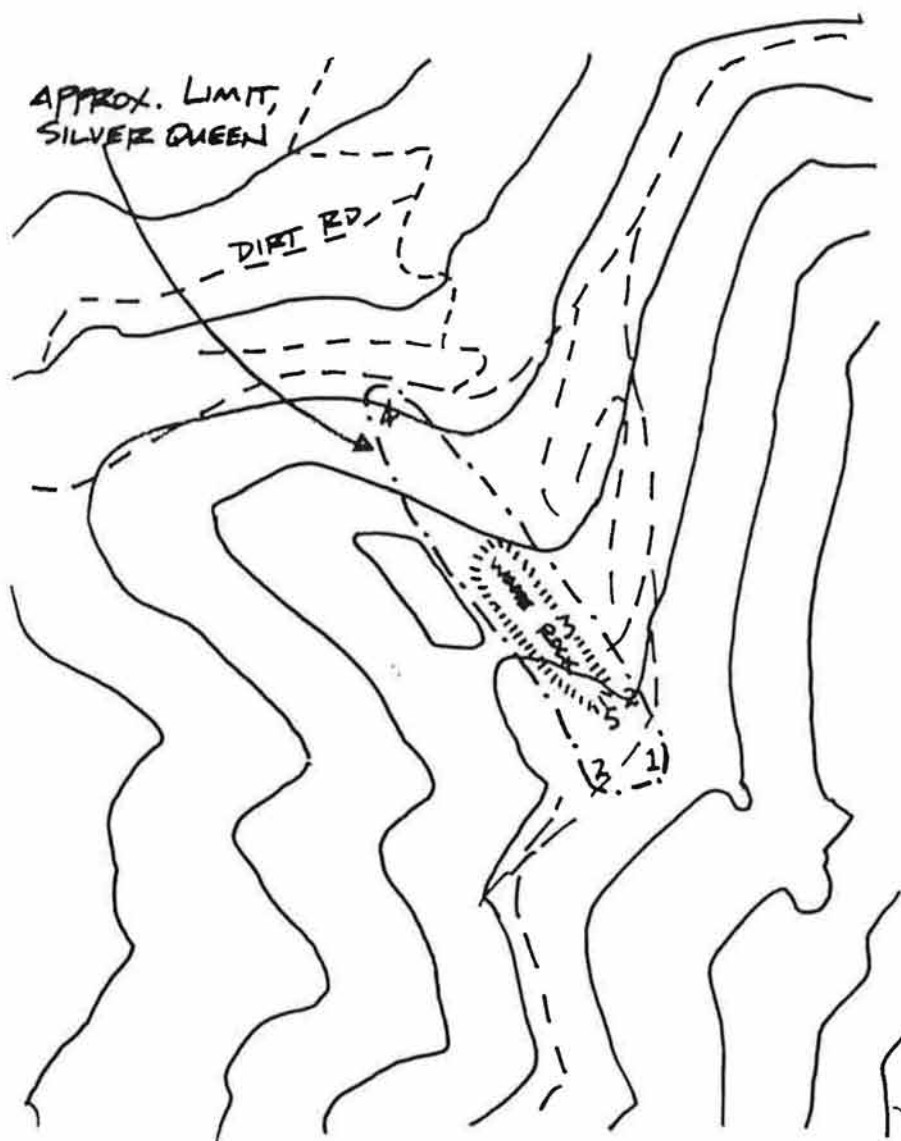
SITE MAP

CA-KER- 4452H

Page 3 of 4

SILVER QUEEN MINE
AREA,

SKETCH MAP
1" = 400'



(SEE ATTACHED KEY TO FEATURES)

SITE FEATURES

PAGE 4 OF 4

FEATURE # DESCRIPTION

COMMENTS

SILVER QUEEN MINE
AREA

Silver Queen Mine Area

1	Glory hole	
2	Truck ore chute	Depression era or later
3	Metal structure	Privy, modern (?)
4	Adit & concrete foundation	Compressor Room
5	Wood structure	Collapsed

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: ^{KER-}445314
Temp. Design: Gypsy-Starlight

Page 1 of 4

1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: 390725 mE 3872050 mN
4. Twp. 10N Rng. 12W; SE 1/4 SW 1/4 SE 1/4 NW 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 60 mmS 198 mmE 6. Elevation: 3200
7. Location: On NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: Depression era & later mining remains - truck ore chutes and adit
10. Area: 60 m (N/S) x 160 m (E/W); 9600 m².
Method of determination: TAPED & TRANSIT MAPPED
11. Depth: none Method of Determination: Subsurface Probing
12. Features: 3 truck ore chutes, adit, assoc. narrow gauge rail lines + waste rock dumps.
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI VALLEY 93065
18. Human remains: NONE
19. Site integrity: Poor. Truck chutes collapsing/destroyed. Few assoc'd artifacts. Modern road has cut through features.
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-2% 29. Exposure: N
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Probably assoc'd w/ 1930s-40s work @ Golden Queen
32. References: Class II inventory, Soledad Mtn; see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines Report 31:465-85.
33. Name of project: as above
34. Type of investigation: Class III inventory
35. Site accession no.: n/a Curated at: n/a
36. Photos: Yes Taken by: Whitley
37. Photo accession no.: GQ On file at: W&S

SITE LOCATION MAP

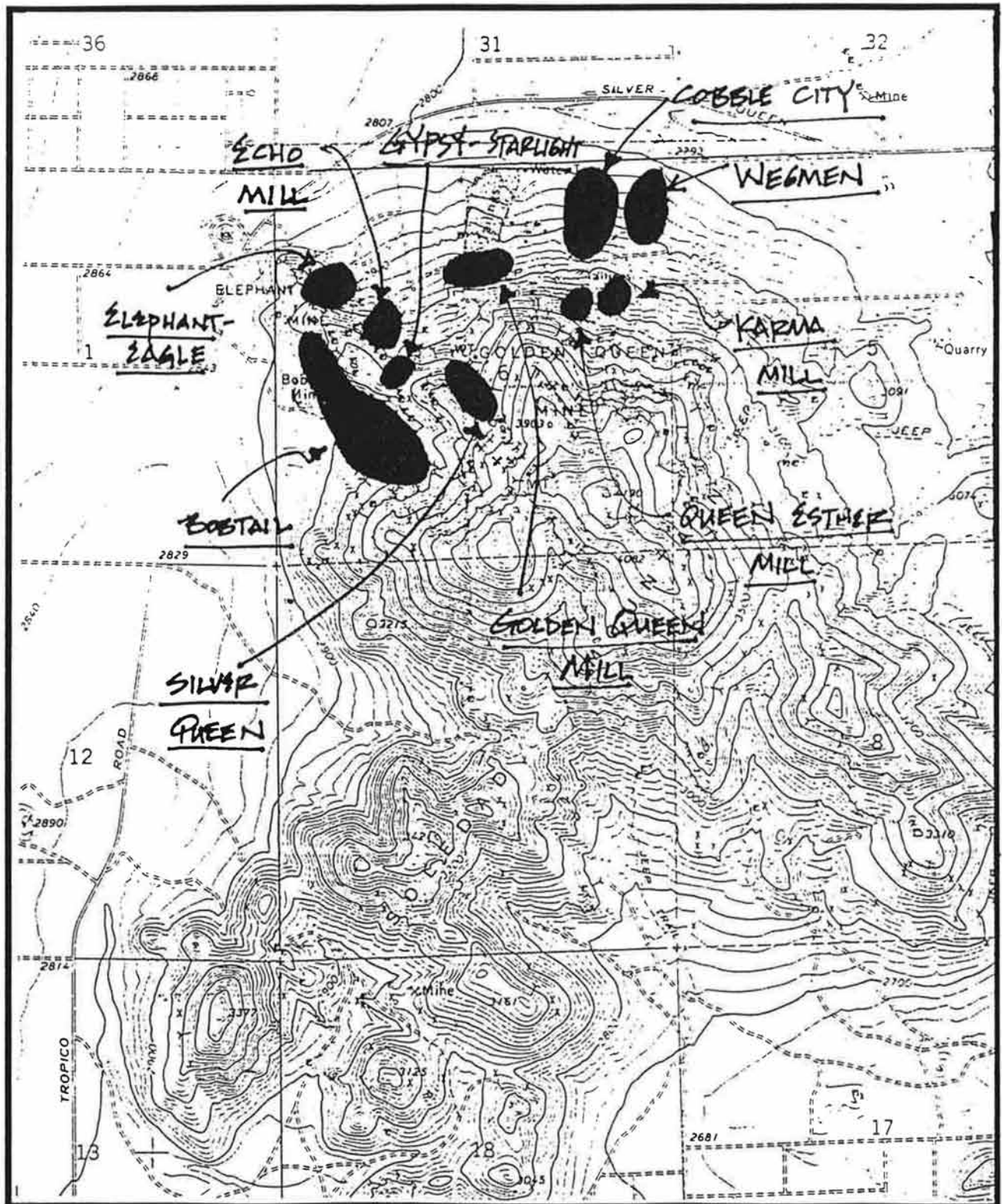
CA-KER-_____

Page _____ of _____

USGS TOPO:

SOLEDAD MOUNTAIN

7.5; Scale 1 : 2000



SITE MAP

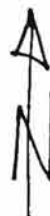
Page 3 of 4.

CA-KER- 4453H

GYPSY-STARLIGHT MINE
AREA

SKETCH MAP

1" : 400



(SEE ATTACHED KEY FOR FEATURE DESCRIPTIONS)

SITE FEATURES

PAGE 4 OF 4.

FEATURE # DESCRIPTION

COMMENTS

GYPSY - STARLIGHT
MINE AREA

Gypsy Starlight

1	Ore ramp and chute	Depression era or modern; truck
2	Ore ramp and chute	Depression era or modern; truck
3	Ore ramp and chute	Depression era or modern; truck
4	Adit and open cut	
5	Dump	Depression era (?) or later

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: *K42-4454H*
Temp. Design: Bobtail Area

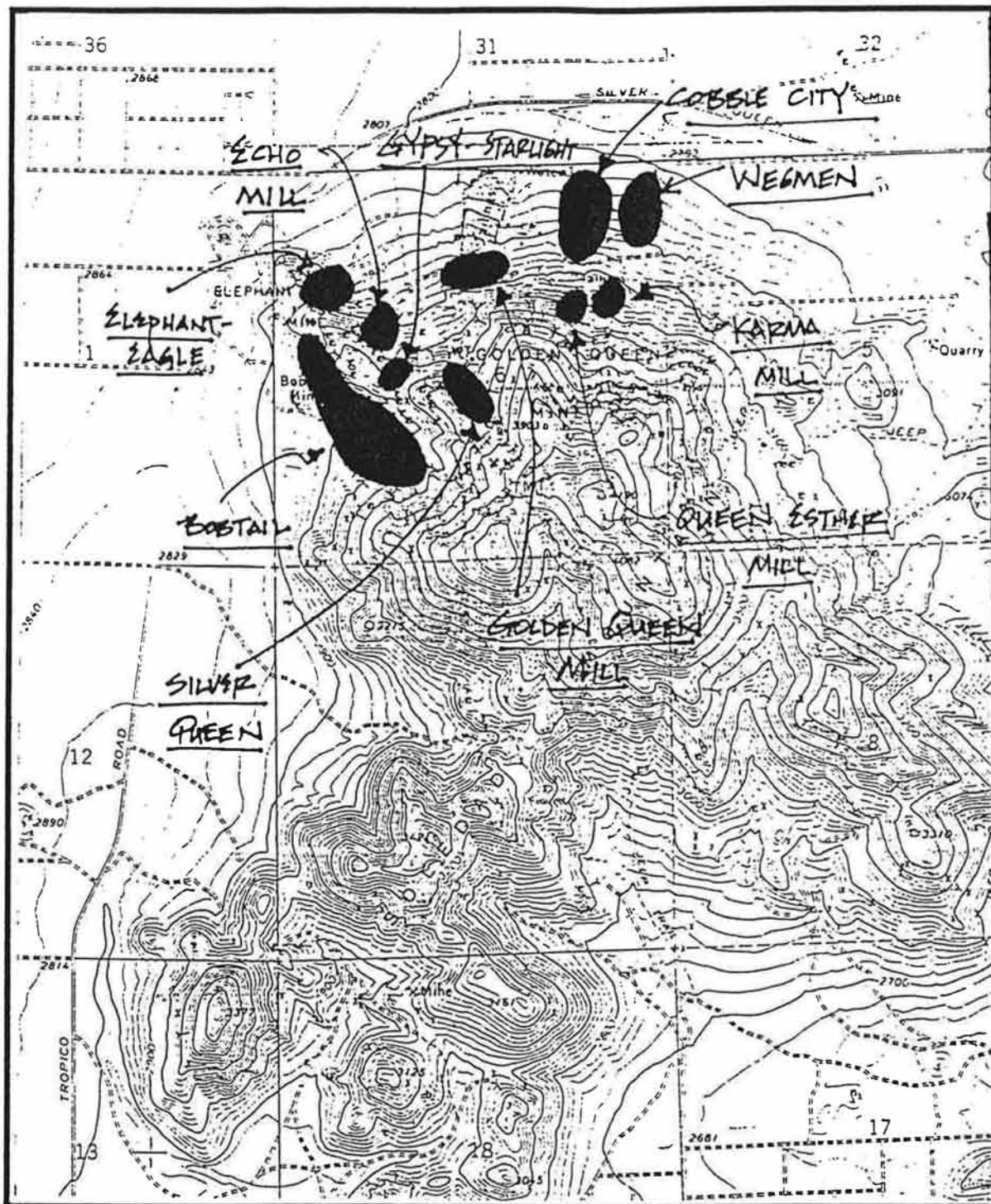
Page 1 of 5 .

1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: 390575 mE 3871850 mN (middle)
N - 390375/3872225; W - 390450/3871850; E - 390800/3871850;
S - 390725/3871650
4. Twp. 10N Rng. 12W; SE 1/4 SE 1/4 SE 1/4 SW 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 68 mmS 192 mmE 6. Elevation: 3080
7. Location: On W/NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: Depression era & later mining features
10. Area: 500 m (N/S) x 500 m (E/W); 250000 m².
Method of determination: Paced
11. Depth: none Method of Determination: Subsurface Probing
12. Features: 3 truck ore chutes (Depression era or modern); Depression era concrete structure; cobble wall structure; machine shop foundations; pad, cobble wall & small can dump (turn-of-century)
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI VALLEY 93065
18. Human remains: NONE
19. Site Integrity: Poor. Evidence of continuous re-use & scavenging of earlier materials, so little integrity except for modern ore chutes. Few assoc'd artifacts. Most features only questionably meet age criteria for archaeological sites (i.e., most appear modern).
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-10% 29. Exposure: W
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Minor/peripheral 20th century mining area w/ no assoc'd mill sites & very little habitation evidence. Remains from Bobtail adits (chutes to n end) & Soledad Ext adit (concrete pad @ S end)

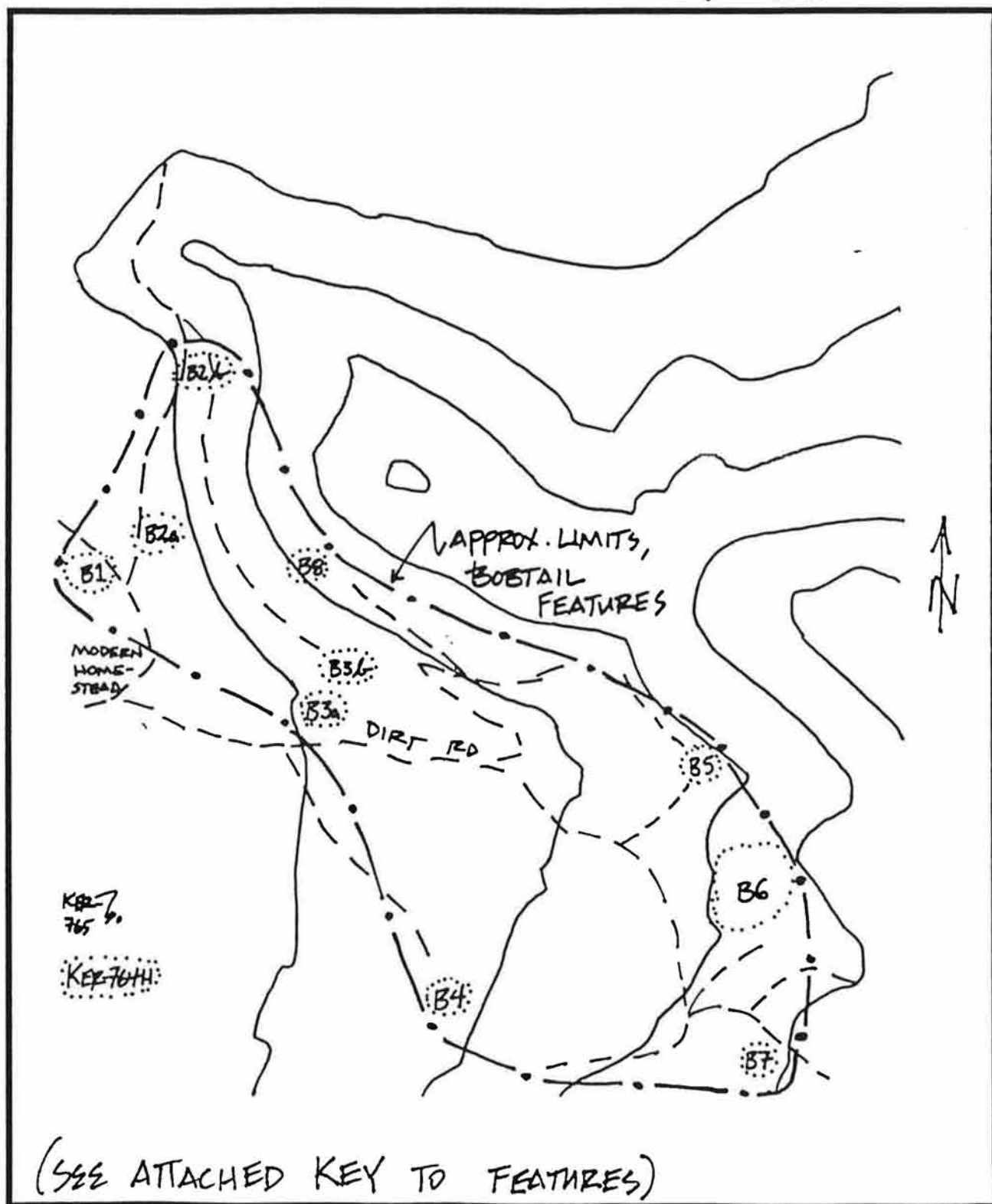
CA-KER- 4454H, CONT'D
BOBTAIL AREA

32. **References:** Class III inventory of Soledad Mtn; see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines Report 31:465-85.
33. **Name of project:** as above
34. **Type of Investigation:** Class III inventory
35. **Site accession no.:** GQ/95- **Curated at:** W&S
36. **Photos:** Yes **Taken by:** Whitley
37. **Photo accession no.:** GQ **On file at:** W&S

USGS TOPO:
SOLEDAD MOUNTAIN
7.5; Scale 1 : 2000



BOBTAIL MINES AREA
FEATURES
SKETCH MAP
1"=400'



SITE FEATURES

PAGE 5 OF 5.

BOBTAIL MINES AREA
FEATURES.

FEATURE # DESCRIPTION

COMMENTS

Bobtail Area

B1	Pad, cobble wall & dump	Turn-of-century
B2a	Truck ore chute	Depression era or later
B2b	Truck ore chute	Depression era or later
B3a	Adit and wood trestle	Depression era or later
B3b	Wood landing/ramp	Depression era or later
B4	Concrete structure	2 room, Depression era
B5	Ore chute, ramp and adit	Starlight (?)
B6	Soledad Ext Machine Rm fdn.	Concrete foundations; post-Depression + earlier remains
B7	Cobble structure	2x4 m, no roof, no artifacts
B8	Headframe on open cut	Deadman below using cable & 55 gal drums, modern

(FEATURE LOCATIONS ON SKETCH MAP).

**PHASE II TEST EXCAVATIONS AND DETERMINATIONS OF
SIGNIFICANCE ON SOLEDAD MOUNTAIN, MOJAVE, KERN COUNTY,
CALIFORNIA**

Prepared for:

**Mr. John Dowis
Golden Queen Mining Company, Inc.
P.O. Box 878
Rosamond, California 93560**

Prepared by:

**W & S Consultants
2242 Stinson Street
Simi Valley, California 93065**

5 November 1995

Management Summary

Phase II test excavations and determinations of significance were conducted for sites CA-KER-4446H, -4447H, -4448H, 4449H, -4450H, -4451H, -4452H, -4453H and -4454H, all of which are historical (Euro-American) sites dating from the beginning the twentieth century or later. These sites are located on the Golden Queen Mine project area, Soledad Mountain, Mojave, Kern County, California. The Phase II test involved mapping, intensive field recording, surface collecting, limited subsurface testing, and the processing and analysis of the recovered artifacts assemblages. Final recommendations for the management and treatment of each of these sites were developed, based on the results of this study, and are presented.

Acknowledgements

We are indebted to John Dowis and David Weiss, for their assistance on this project. We have also benefitted greatly from conversations with Mrs. Grace Wegmen Meehl and Larry Vredenburg, both of whose knowledge of the study area has been very helpful to us. We also thank Larry for facilitating our use of his historical mining photographs, which have also aided our understanding of the history of the study area.

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**PHASE II TEST EXCAVATIONS AND DETERMINATIONS OF
SIGNIFICANCE ON SOLEDAD MOUNTAIN, MOJAVE, KERN COUNTY,
CALIFORNIA**

1.0

INTRODUCTION

1.1 Introduction

At the request of Mr. John Dowis, of the Golden Queen Mining Company, Inc., Rosamond, California, a Phase II program of archaeological testing was conducted on a series of historical (Euro-American) sites located on Soledad Mountain, Mojave, Kern County, California. The sites tested and evaluated during this project include CA-KER-4446H ("Cobble City"); CA-KER-4447H ("Wegmen complex"); CA-KER-4448H ("Karma Mill"); CA-KER-4449H ("Queen Esther Mill"); CA-KER-4450H ("Echo Mill"); CA-KER-4451H ("Golden Queen Mill"); CA-KER-4452H ("Silver Queen Mine"); CA-KER-4453H ("Gypsy-Starlight"); and portions of CA-KER-4454H ("Bobtail") lying within the study area. This project was conducted by W & S Consultants, Simi Valley, California, with the fieldwork directed by David S. Whitley, Ph.D., and Joseph M. Simon, and the lab work directed by Tamara K. Whitley, M.A.

This project was designed to yield sufficient data to adequately characterize the nature, size and significance of the extant cultural resources located within these nine archaeological sites, and to thereby provide final recommendations for the treatment and disposition of these cultural resources. The determinations of site significance for these nine sites have been performed following Section III, Appendix K, California Environmental Quality Act, Law and Guidelines, June 1986. In addition, federal criteria contained within Title 36, Part 60.4 (36 CFR 60.4), "Criteria for Evaluation of Archaeological Sites and Historical Places", Code of Federal Regulations, July 1989, were consulted and applied, as appropriate, during the determination of significance process.

The following section of this chapter provides a brief background to this project. The subsequent chapter is a summary of the field techniques employed during the Phase II testing program. Next we turn to a summary of the results for each site. We then present the artifact assemblages recovered from each of these nine sites. We conclude with final recommendations for the treatment of these historical cultural resources.

1.2 Background to the Study

The nine sites considering in this Phase II study are located on the northwestern side of Soledad Mountain, which is a northern extension of the Rosamond Hills located about five miles south of the town of Mojave, in southeastern Kern County (Figure 1). All nine sites fall within Section 6, Township 10 North, Range 12 West, with an average site elevation of approximately 3000 feet a.s.l. Environmentally speaking, the northern side of Soledad Mountain is an area of relatively steep terrain, which dips from south to north. Currently, this area is covered by a creosote scrub plant community, with zones of bare rock and historical mine tailings also common.

The current Phase II project, completed in August and September, 1995, consisted of a follow-up on a Phase I survey conducted earlier in the year for the Golden Queen project (see W & S Consultants 1995a, 1995b). The Phase I survey resulted in the discovery and recording of nine archaeological sites, all of which are historical (Euro-American) in nature, and each of which resulted from the mining activities on the mountain. These sites can be summarized as follows:

CA-KER-4446H - This is a large residential area that we believe was

associated with the Queen Esther Mine and Mill, and we have labeled "Cobble City". It dates primarily from about 1904 to 1910, although a small amount of Depression era use is evident at this locale.

CA-KER-4447H - This site is the Wegmen homestead. It includes a series of features and habitation structures associated with the Karma Mine and Mill, which date from about 1903 to 1904. However, portions of the site were occupied continuously into the 1990s.

CA-KER-4448H - This is the Karma Mill, which was in operation from 1903 to 1909. The mill structure, however, burned in 1947.

CA-KER-4449H - Adjacent to the Karma Mill, this is the Queen Esther Mill, was operated from 1903 to 1910.

CA-KER-4450H - This site is the Echo Mill, located towards the northwestern extreme of Soledad Mountain. It ran from 1903 to 1905, when it was dismantled and abandoned.

CA-KER-4451H - This is the Golden Queen Mine and Mill, which was constructed during the 1930s and was dismantled about 1950.

CA-KER-4452H - The site consists of a series of mining features on the Silver Queen claim, which consist of a small clustering of Depression era and later mining remains. the silver Queen was operated as part of the Depression era Golden Queen activities.

CA-KER-4453H - This site consists of mining features on the Gypsy Starlight claim. These comprise a small grouping of ore chutes and ramps dating from the Depression era.

CA-KER-4454H - This is a large site consisting of miscellaneous mining features on the western side of Soledad Mountain, largely but not entirely within the area of the Bobtail group claims. Four features within this larger site fall within the current study area; they consist of one probable turn-of-the-century cobble structure, and three Depression era or later mining features related to the Soledad Extension Mine.

1.21 Historical Summary

Considerable background to this region and the sites, per se, has been provided in the reports resulting from the earlier Phase I work within the Golden Queen study area (see W& S Consultants 1995a, 1995b). We

summarize briefly here the pertinent aspects of these detailed background studies, which concern the mining history of this portion of the Mojave Desert. This history has been summarized in period and more recent publications, with Brown (1915), Clark (1970), Hensher and Vredenburg (1991), Miller and Miller (1976), Settle (1963, 1967), Settle and Settle (1984), Starr (1988), Troxel and Morton (1962), Tucker (1923, 1935), Tucker and Sampson (1933), and Tucker, Sampson and Oakeshott (1949) constituting the primary sources. The mining history of this area, summarized below, has been synthesized from these and other unpublished sources and documents.

The first recorded mining activity in the region occurred on March 8, 1894, when W.W. Bowers found gold on a promontory south of Mojave, then known as Little Buttes (subsequently changed to Bower's Hill and now Standard Hill). His first claim was the famous Exposed Treasure mine, which he brought into operation shortly thereafter, shipping ore worth \$60/ton. By 1896 a camp had sprung up around this site (Hensher and Vredenburg 1991). The Exposed Treasure discovery apparently spurred local interest in prospecting as, later in 1894, Ezra M. Hamilton discovered gold in the Rosamond Hills, to the south, at a location that would eventually become known as Tropico (Settle 1963, 1967).

Mining activities within the Golden Queen study area were apparently stimulated by the Exposed Treasure discovery, and can be divided generally into three periods. The first, stretching from 1894 to about 1910, was an era of prospecting and the development of a series of early properties and mills (Tucker 1935). The three primary mines in operation during this period were the Karma, Queen Esther and Echo, each of which had their own mills, with lesser amounts of mining at the Eagle Group and Bobtail claims, both of which fall outside of the current study area, and neither of which had mills during this period. Activity was minimal from about 1922 to the start of the Depression when, like many mining regions in the west, numerous small scale mining efforts were started. According to Tucker (speaking of the Mojave mining district as a whole, which included the Tropico area 17 miles to the south and Standard Hill to the north), about 50 to 70 leasers worked old mines from 1931 to 1934, hauling their ore to the Tropico for milling (Tucker 1935). Activity accelerated dramatically during the mid-1930s on Soledad Mountain, however, when the Mojave Mining District was revived by the discovery of the Silver Queen vein, leading subsequently to the establishment of the Golden Queen mine and mill. This represented the second primary period of mining within the study area, with the Golden Queen building a major cyanide plant, and consolidating a number of the earlier claims and patents. Depression era mining terminated in 1942 with the official

closure of all gold mines by the War Production Board. The final period of activity has occurred in recent years, during which time a limited amount of mining has been conducted on different claims on Soledad Mountain.

Queen Esther

The Queen Esther mine and mill appear to represent the first mining activity on Soledad Mountain, with Troxel and Morton (1962) claiming that the mine was first discovered in 1894; like all properties within the study area, however, existing documents at the Kern County Hall of Records only begin about 1900, so the initial date of the claim is unknown.

What is certain is that the mine was originally called the Thomson and Boyle, for its first owners Henry D. Thomson and J.L. Boyle, but its name was relatively quickly changed to the Queen Esther. A partner with Thomson and Boyle in the mine and mill was Harvey S. Mudd, of the Pomona colleges fame, who most likely was the partner who funded the mill construction.

Initial work at the mine, which is located on the north face of Soledad Mountain, yielded small tonnages of high grade shipping ore. A 1901 account in the Mining and Science Press (2/2/01) states that ore ran at \$180/ton. In 1903 a mill was constructed on site. According to a period

account in this same weekly (Mining and Science Press, 4/11/03), a 100 ton roller mill was put in, apparently with a cyanide plant. This was increased to 150 tons in 1904 (Troxel and Morton 1962), but not without difficulties: Mining and Science Press reported on 11/14/03 that "The Queen Esther mill at Mojave is shut down on account of the breaking of some machinery."

A (somewhat florid) period account of the Queen Esther mill in operation was published by Margaret Troili in the Overland Monthly in 1908. She stated:

[H]ere on the steep slope the big mills shook as they devoured the gold ore. Cottages of lumber and stone trailed down the slope; some sat squarely on the level, but the mills lorded over it all. Inside the mill, the shaking seizes one, and a cloak of dust whirls around and refuses to settle. In the engine room, vast power is created, vast work is done. It makes me wonder at man - the big wheels whirling, nice parts doing their work with precise regularity, tremendous beltings rushing up through the timbers and making a great roar and tumult up there, rushing down again like a demon, seizing the great wheels for a frolic, and oozing upward like a never-ending

brown genius from a little bottle.

(Troili 1908:401)

Troili's references to the cottages and the mills in plural concern a nearby residential area and the adjacent Karma mill, respectively, which are discussed subsequently.

The Queen Esther was shut down in 1910, by which time 286 tons of ore had been mined. No accurate production figures for the mine exist, though it is estimated to have produced millions of dollars worth of gold (Troxel and Morton 1962). The Queen Esther was consolidated with the Golden Queen mine in 1935, with its veins apparently worked and perhaps some of its tailings rerun at the Golden Queen mill. The original Golden Queen mill, however, was apparently never used after 1910, and was probably dismantled some time after it closed.

Karma Mine

The Karma mine, due east of the Queen Esther, was apparently also first discovered in 1896 and was quickly put into operation, with ore averaging 7 ounces of silver/ton alone during the first seven years of its production (Troxel and Morton 1962). By 1899 a large boarding house and bunk house had been built for mine employees, "and cabins sprouted like

wildflowers along the slopes" (Hensher and Vredenburg 1991:55) below the mine. According to Mrs. Grace Wegmen Meehl (personal communication, 1995), the Karma Mining Company spared no expense in housing its employees, and built a number of well-made wooden buildings for their use, some of which are still standing.

According to period accounts of the Karma published in the Mining and Science Press (2/2/01), by early 1901 "the shaft is down 280 feet. Four hundred feet of drifting is completed". Due to increasing lower yielding ore, construction of a mill was begun in 1903 but, like most such undertakings, things did not go as smoothly as optimistically predicted. Again, the Mining and Science Press tells us on August 29, 1903, that the "Machinery for the Karma mill, near Mojave, is on the ground and building will begin Sept. 1. More men will be put into the mine". Almost two months later (10/17/03), the same source stated: "The Karma M[in]e Co. at Mojave has bought a second-hand 10-stamp mill and will add to it 10-stamps more. J. Gerner is president and superintendent". And one month later (11/14/03) Mining and Science Press reported that "J. Gerner, superintendent of the Karma M. Co., says the mill will be in operation this month". Other records indicate that the 20-stamp mill was finally in operation sometime in 1904. This was effective until 1909, when the mine and mill were shut-down due to poor recovery (Troxell and Morton 1962).

The mill was apparently never reopened, and the stamps and stamp boxes are still on site (see below).

The mine was reactivated following World War I when the US Smelting and Mining Company at Kennett agreed to purchase low grade ore with high silica content. As is clear, the mill itself was not reactivated. Ore shipped from the Karma to Kennett between 1917 and 1926 averaged between 5 and 9 ounces of silver/ton (Troxell and Morton 1962). The mill building of the Karma Mine was still standing until 1947, when a fire was accidentally started by visiting teenagers, which burned it down (Mrs. Meehl, personal communication, 1995).

In 1926 the Karma was purchased by E.L. Wegmen, becoming part of the Wegmen Group (consisting of the Karma, Eureka and Grace Groups). Engelbert (Bert) Louis Wegmen was born on February 10, 1873, in Oedding, Germany, and moved to the U.S. with his family when he was seven years old. Due to a case of malaria, he moved out west as an adult, arriving in the Mojave area on November 11, 1903. Having worked with steam engines back east, he was hired to work in the steam plant at the Karma mill. Initially the lack of housing on the hill forced him to live in a lean-to attached to the superintendent's house (Mrs. Grace Wegmen Meehl, personal communication, 1995). But with small cabins appearing on the

north slope of Soledad Mountain, built by the company and providing homes for men with families, he was able to send for his wife and two children, who arrived on May 25, 1904. Subsequently, he and his wife had three more children, all of whom were born on Soledad Mountain, including Grace Eleanor Wegmen Meehl. In addition to his work at the mill, Wegmen was apparently active in the development of a school at Soledad City, serving as the clerk of the school board for many years (ibid; Settle and Settle 1984; see below).

Exposure to the Karma mill apparently strongly motivated Wegmen to pursue mining, as it subsequently became his career. When the Karma mill shut down in 1909, Wegmen stayed on as a guardian, according to the his statement of occupation in the 1910 census (W & S Consultants 1995a). Thereafter he continued his own mining pursuits, eventually becoming involved with the Exposed Treasure Mine, on Standard Hill, and the Randsburg mines, where he served as superintendent (Settle and Settle 1984). In the 1920s and 1930s, however, he used the assay office of the Karma Mine (located near the hoist house) to run samples from Randsburg (Mrs. Meehl, personal communication, 1995). He maintained his residence within the study area throughout his life, however, with his wife living at the Wegmen home into the 1950s, and other family members occupying the homestead into the 1990s.

Following the acquisition of the Karma mine and mill, Wegmen began mining operations. In 1933, he patented the Karma property (Kern County Hall of Records M.S. #6140), thereby strengthening his claim to the property. According to Settle and Settle, however, the processing of the ore was conducted off site: "Ore was sledded down the hillsides to ore-bins from which bulk and sacked ore was shipped by gondola car-loads to smelters" (1984:91), with the ore shipped to the Golden Queen mill, one-half mile west from 1937 to 1941. In 1951 a new small vein was discovered. From the 27 tons of ore extracted from this operation, 10 ounces of gold, seven ounces of silver, 251 pounds of lead and 40 pounds of copper were extracted. This played out relatively quickly so that, by 1958, the only mining activity at the site was a two man cross-cutting operation (Troxel and Morton 1962). Clark (1970) estimated that the Wegmen Group as a whole produced around \$100,000 in total during the life of its operation.

Echo Mine

The Echo mine and mill, located on the northwestern side of Soledad Mountain, was first discovered during the 1890s, and was worked until about 1905 by the Echo Mining Company, producing about \$200,000 in ore

(Troxel and Morton 1962). As with the Queen Esther and Karma, a stamp mill was constructed at the Echo in 1903, a process that apparently went fairly smoothly, judging from period accounts. According to the Mining and Science Press of March 7, 1903, "The 10-stamp mill building at the Echo Mine, 5 miles from Mojave, will be completed by March 10. Development of the mine is in progress". One month later, the same source reported that "The 10-stamp mill of the Echo Mine Company of Los Angeles, Cal, 5 miles west of the village of Mojave, is running steadily on good ore. A cyanide plant is being built to work the tailings direct, there being no intermediate concentration, all the ore being oxidized" (Mining and Science Press, 4/11/03). Later in the year the Mining and Science Press stated that "The Echo M. Co. at Mojave propose to add a centrifugal or rotary mill to its 10-stamp mill. Superintendent J. Keith reports opening a rich shoot in the mine carrying horn silver and black sulfide of silver. G.H. Hooper is president and manager" (10/17/03). Finally, of November 3, 1903, the Mining and Science Press reported that "J. Frank Walters, of Los Angeles, has bought the Echo Mine at Mojave, and will soon resume working the mine and the mill with A.M. Peck as superintendent. The Bobtail mine has been purchased by the same company. The new group consists of 17 claims and has a 20-stamp mill and cyanide plant".

The implications of the above reports seem to be that the Echo mine and

mill was operating quite smoothly, with consideration being given to expansion. In less than a one month period, however, the mine and mill apparently shut down, and were purchased by a new outfit, with the mill doubled in capacity during this same period. Records at the Kern County Hall of Records indicate, in fact, that the mine experienced 11 deed changes between 1902 and 1906, suggesting that purchase and resale were a common process at the Echo.

According to Troxel and Morton (1962), the mine closed around 1905, with the mill dismantled in 1906. Carroll Allen is listed as owner from 1906 to November, 1910, at which time it was purchased by George McBryant, who was listed as a mine watchman in the 1910 census (W & S Consultants 1995a). McBryant apparently lost the mine for unpaid property taxes the next year (Kern County Hall of Records Tax Deed #256-8).

The Echo mine was idle except for minor activity until 1935 when, with the discovery of the Silver Queen, the Mojave Mining District was revitalized. Subsequently, it was incorporated into the Golden Queen Group (Troxel and Morton 1962).

Golden Queen

The Golden Queen mine has its origin in 1933, when George Holmes discovered the Silver Queen vein, high on the north slope of Soledad Mountain. This discovery revitalized the Mojave Mining District generally, with approximately \$300,000 removed from the mine between 1933 and 1935. In this later year, Holmes and his partners sold their mining interests to the Gold Fields American Development Company, a subsidiary of the English company Gold Fields of South Africa Mining Corporation, for the sum of \$3.5 million. The resulting Golden Queen Mining Company represented a consolidation of a series of groups on Soledad Mountain, including the Silver Queen, Queen Esther, Echo, Gray Eagle and Soledad Extension properties (Tucker 1935; Troxell and Morton 1962). A state of the art mill and cyanide plant was also built in 1935, starting in operation in October of that year.

According to a period account (Tucker 1935), the main haulage tunnel at the Golden Queen held 30 pound rails supporting 12 Westinghouse Electric two-ton locomotives and cars. Mine equipment included three Imperial-type Ingersoll-Rand compressors, a blacksmith shop and a machine shop. The mill and cyanide plant ran 24 hours per day with a 350 tons/day capacity. It had 700 tons coarse ore bins, primary and secondary gyratory crushers, Marcy ball mills, Dorr classifiers, and then a series of Dorr

agitator and thickener tanks, with Oliver drum filters at the end to dewater the slimes (ibid:478). Two hundred men were employed at that time: 150 on construction, and 50 on mine development.

By mid-1937, it is estimated that the mine was producing 300 tons of ore per day. Between 1936 and 1942, approximately one half-million tons of ore were processed, yielding \$6 million in gold and silver. Increased mining costs after the war prevented its reopening, and the mill was dismantled in about 1950, and it burned sometime subsequently. However, minor activity continued into the 1950s, and the total production for the mine has been estimated at about \$10 million (Troxel and Morton 1962).

This figure has been grossly confirmed through the acquisition of copies of the original accounting ledger sheets for the mine and mill. Based on records for 64 months dating between early 1936 and June 1941 (i.e., for less than the total period of production), the actual receipts for gold bullion sold by the Golden Queen Mining Company totaled \$7,867,782, thereby averaging about \$123,000/month. However, these records indicate that the mill was processing and purchasing a considerable amount of ore from other mines during this period (including, according to various sources, the Wegmen mines). Custom milling apparently accounted for \$2,200,736 of

the Golden Queen's bullion sales, representing fully 29% of the total for the 64 months. Where all of this ore originated is unknown, especially given that the Elephant-Eagle Mill was also operating on Soledad Mountain at this same time.

"Cobble City"

In addition to the mines and mill, per se, the historical records also indicate the development of a residential settlement on Soledad Mountain, which has been referred to above. In two documents (one historical and one recent) this is referred to as "Soledad City". However, it needs be noted that Mrs. Grace Wegmen Meehl, who was born, raised and lived on the Wegmen property for most of her life, had never heard the term "Soledad City" used while she lived there (personal communication, 1995), so this is apparently a slight misnomer; in an effort to avoid introducing additional ambiguity into the historical record, we have referred to this residential area as "Cobble City", reflecting the primary building material there employed.

Regardless of toponym, this residential area is described very briefly in a few reports as consisting of a series of wood and stone cabins on the side of the mountain, which first started to develop around the Karma mine in about 1899 (e.g., Troili 1908; Settle and Settle 1984; Hensher and

Vredenburg 1991). An oral history of the Wegmen family also indicates that it included a school; apparently, the local population of children was sufficient to keep this school open until just a few years before the opening of the Golden Queen mine in the mid-1930s. According to Mrs. Meehl (personal communication, 1995), who went through the tenth grade at this school, it was originally located near the Queen Esther Mill, but was moved downslope around 1910 to a building on the north side of Silver Queen Road, north of the study area, which was recently bulldozed. Attendance averaged about 15 students in this one-room school, although it had been as high as approximately 25 when the mines were in operation. In order to keep the attendance up, and therefore continue to qualify for state funding, children were also brought in from Vreda, the nearby rail siding near the intersection of what are now Silver Queen Road and Highway 14. Furthermore, Mr. Engelbert Wegmen, who was on the school board, always insured that the teacher hired for the school herself had a family of children to boost enrollment.

According to the 1910 census (see W & S Consultants 1995a), the total population living on Soledad Mountain at that time was 95 individuals, the majority of which were unmarried males, but also including a significant number of women and children. Note that this total represents the period after the closing of the Karma and Echo mines, at a minimum, therefore it

probably does not represent the local population peak, which presumably would have occurred around 1904 - 1905. According to Mrs. Meehl (personal communication, 1995), family tradition maintained that the population was as high as 200 people at the peak of mining activities around 1905, which seems entirely plausible, given the 1910 census figures. Subsequently, the population dropped dramatically, with very few people living here in the 1920s and 1930s; sometimes it was limited to only two or three family groups homesteading on the mountainside.

The majority of the adult males, not too surprisingly, list their occupations in the census as "quartz miners". A series of other occupations - almost all mining camp related - are also represented, including waitress and housekeeper, presumably at the boarding house and dining hall for the unmarried miners. As regards ethnicity, a significant number of the miners originated in Slovenia, eastern Europe. Probably reflecting the local mining slang of the time, almost all of the Slovenian miners are listed as having the first name of "Mike". Another significant ethnic group represented are Italians. According to Mrs. Meehl (personal communication, 1995), the residential area centered in a series of cobble structures downslope from the Queen Esther Mill was known as "Little Italy", in recognition of the ethnicity of the inhabitants of this area. Although greater written documentation would be helpful, the 1910

census nonetheless indicates a considerable amount concerning the size, socioeconomic breakdown, and ethnicity of the population associated with the early historical mining within the study area.

Judging from the historical records and Mrs. Meehl's recollections, the residential area on the mountainside can be divided into two areas: on the northeastern side of the study area there were a series of wood frame cabins and structures built by the Karma Mining Company; this area eventually became the Wegmen homestead. Towards the west, and essentially north and west of the Queen Esther Mill, was "Little Italy", the cobble structures built by the miners working for the Queen Esther Mine. These self-made structures reflected the Queen Esther corporate policy of "extreme frugality", as described by Mrs. Meehl (personal communication, 1995).

Based on an examination and analysis of 1903 and 1904 photos, presented elsewhere (see W & S Consultants 1995a), it is clear that the oldest habitation area on the mountain is on the northeastern side of the study area; that is, the eastern structures within the Wegmen complex. The row of wooden cabins extending downhill from the Karma Mill and "Little Italy", in contrast, post-date this initial settlement by at least a few months, if not about a year, and clearly were not in place before 1903.

The majority of the habitation on Soledad Mountain, then fell within a fairly narrow time span of less than a decade, running from 1903 to 1910, albeit Depression era and modern habitation has contributed an overlay to these early twentieth century remains.

2.0

FIELD METHODS

2.1 Introduction

Phase II archaeological fieldwork at the nine sites within the Golden Queen Mine study area was intended to establish the nature and significance of each of these sites, and to thereby provide baseline data from which a determination of the ultimate disposition of each cultural resource could be made. This required the collection of a representative sample of artifacts and archaeological indicators from the sites, the establishment of the vertical and horizontal boundaries of any cultural deposits that might be present on the sites, and an analysis of the recovered artifact assemblage from each archaeological locality, should such be present at each site.

Procedures followed in the collection of data useful for establishing the nature and significance of the site included mapping, surface collecting of artifacts lying on the ground surface, and test excavation of pits to establish the presence or absence of a subsurface archaeological deposit, as well as to characterize such a deposit if found to be present. Because it was immediately obvious that the sites considered during this study were

primarily surface manifestations, as is common with many twentieth century historical sites, the majority of the field work was directed towards mapping, surface recording and collecting. We discuss each of these field methods below.

2.2 Mapping and Surface Collection

In order to determine the maximum areal extent of each site, the initial field procedure was to locate and map all extant features on each site. These included habitation remains such as buildings, foundation and wall remnants, privies and dumps, and mining features such as adits, glory holes, stopes, buildings, head frames and ore chutes, among others. The mapping itself involved two different levels of data recording: locational mapping of all features across each site, thereby creating a site map; and the finer-detailed mapping of each feature, thus resulting in a series of feature maps or sketches. A transit, stadia and chain were used for the site mapping; feature mapping involved the use of a surveyor's chain, 50 and 10 meter tapes, and a Brunton compass.

Once the various features on each site were identified and mapped, a sample of the surface artifacts present on the groundsurface in or around

each feature were mapped and collected. Generally, these were restricted to functionally and especially temporally diagnostic artifacts. (Because of this restriction, and because not all features had associated artifacts, surface collection was further restricted to a sample of the features). In order to identify all such diagnostic remains, the general area of each site was walked by crew members, spaced in two meter transects. Identified artifacts and archaeological indicators were then marked with flagging tape. Remains found within an area of approximately 3 meters-square in size (i.e., within a circle with a one-meter radius) were treated as discrete artifact associations and collected as clusters.

2.3 Test Excavations

In order to ascertain whether or not subsurface archaeological deposits were present at each of the nine sites, and to allow for the characterization of such cultural deposits should they prove to be present, subsurface testing was conducted. Because of the location of these nine sites (generally on steep, rocky slopes, including in some places on areas of exposed bedrock) and the general nature of the remains contained therein (historical remains less than 100 years old), it was immediately apparent that any subsurface deposits would be localized and rare. This is because

such locations are generally unfavorable for the subsurface burial of artifacts and because little time had passed, archaeologically speaking, since the remains were originally deposited. Subsurface testing, accordingly, targeted localized areas where the burial of artifacts was most likely, such as within buildings, in privies and on dumps.

Further reflecting the nature of these sites, subsurface testing involved two procedures. The first, in areas where subsurface remains were likely, involved the hand excavation of 0.25x0.25 meter test pits. These were dug with mattock and trowel in arbitrary 10 centimeter levels. Spoils from each of these levels were screened through one-eighth inch mesh. All artifacts/archaeological indicators were collected and bagged by unit and level. Excavation was continued through two culturally sterile levels (i.e., 20 centimeters), or until decomposing bedrock was encountered.

The second procedure, employed in site areas deemed unlikely to contain subsurface deposits, involved the excavation of shovel test pits (STPs), approximately 30 centimeters in diameter and a minimum of 40 centimeters deep. These were dug with round point shovels, with spoils also screened through one-eighth inch mesh.

The following allocation of subsurface pits, per site, was made, based on

the conditions at each locale, with the larger number of units reflective of conditions more favorable for subsurface deposition:

CA-KER-4446H (Cobble City) - 8 units;

CA-KER-4447H (Wegmen) - 4 units;

CA-KER-4448H (Karma) - 1 unit;

CA-KER-4449H (Queen Esther) - 1 unit; and

CA-KER-4450H (Echo) - 2 units.

That is, a total of 16 test pits were excavated on five of the nine sites. For the remaining four sites, which consisted exclusively of mill and mining (as opposed to habitation) areas, and which appeared to date to the Depression era or later, STPs were employed. Two of these were excavated on each of these four remaining sites, for a total of eight STPs.

3.0

FIELD RESULTS

3.1 Introduction

The field tasks involved in a Phase II test excavation and determination of significance can be conceptualized in terms of four activities: first, establishing the size of each site through mapping and feature recording; second, determining the presence or absence of subsurface deposits on each site through subsurface testing; and third, characterizing the nature of each site in functional and temporal terms through an analysis of the recovered artifact assemblage. Finally, information derived from the above activities are synthesized to determine the significance of each site in terms of integrity, uniqueness, research potential and other heritage values. In this chapter, we discuss the results of the fieldwork relative to mapping and feature recording, and subsurface testing. In the following chapter we consider in some detail the artifact assemblages recovered from various of the sites, and reserve the determination of significance for the final chapter.

3.2 Mapping and Feature Recording

3.21 CA-KER-4446H (Cobble City)

Mapping resulted in the recording of 53 surface features at this site: 31 structures/building foundations; 12 privies; four leveled pads/terraces; and four dumps/tin can scatters (Table 1). The distribution of these features is illustrated in Figure 2. As is apparent in this map, the site covers an area established at 215 meters N-S by 154 meters E-W, or 33,110 meters square. We discuss the individual features at this site below.

Structure A1 (Figure 3) - This feature, towards the north end of the site, is a small single room, measuring 10 feet E-W by 11 feet N-S, that has been dug-out into the slope of the hillside. It has unmortared, natural fieldstone cobble walls that are a maximum of 30" high lining three sides, with the opening to the north (downslope). A 20 feet long retaining wall, consisting of a single course of unmortared cobbles, abuts the SE corner of the dug-out. A considerable scatter of surface artifacts (early twentieth century in age) is present south and west of the dug-out; however, this room sits at approximately the northernmost, downslope end of the site, and it is unclear whether this represents an intentional dump, or simply

the downslope accumulation of debris at the far end of the site. Structure A1 appears to be associated with B1, which represents the water works for the Queen Esther Mill.

Structure B1 Complex (Figure 3) - B1, a complex of three features, is located eight meters north of A1 and is the northernmost feature at Cobble City. This complex consists of two metal water tanks, seven feet in diameter and 10 feet high, and a wooden plank flooring foundation for what appears to have been a pump house, measuring 15 feet E-W by 11 feet N-S. A four inch riveted iron pipe runs from the tanks through the site and appears to continue to the Queen Esther Mill, although mill tailings have buried the some of the upper portions of pipe. A wooden machine stanchion is present on the wooden plank foundation, while miscellaneous pipes, some tin cans and metal and wood pulleys are present around this feature complex. A slate electrical insulator and a porcelain electrical throw-switch (marked "BECO" over "15 Amp" over "125 W") were also found around the foundation, indicating that it was electrified.

Structure C1 (Figure 4) - This feature is a small, three-walled single room structure made from mud mortared cobbles, measuring 12 feet N-S by 11 feet E-W, and located in the northwestern portion of the site. It is unclear whether these walls served as a windbreak for a tent, or if the

upper portions of the walls were made of now missing wood, although the first seems more likely. A rectangular terrace or pad is located in front (E) of the opening to the structure, with a rock and dirt berm forming its southern (up slope) edge and a single coarse cobble edging forming the northern sides of the terrace. A considerable quantity of debris is present in front (E) of this structure, stretching towards A1; again, it is unclear whether this represents downslope movement from structures higher up on the slope, or a true, in place dump. However, they are early twentieth century in age.

Structure D1 (Figure 5) - This structure is close to identical in form, and is located near to, Structure C1, although slightly larger in size; in this case 13 by 12 feet. Again, it consists of a three walled, mud mortared single room, opening to the east and fronted by a long rectangular terrace that is edged by a single coarse of fieldstone cobbles, containing associated artifacts of the same age. The proximity of these two structures on the northwestern end of the site, and the fact that they are so similar in form and age argues that they were built by the same individual and/or served some purpose slightly different than the other structures on the site.

Structure E1 (Figure 6) - This structure is a single room enclosure that has filled with colluvium. It is the largest single room on the site (17

feet N-S by 26 feet E-W), and is made with unmortared fieldstone cobbles wall that are ~14 inches wide and ~20 inches high. It is entered through a relatively narrow passage near its NE corner. The large size of this structure, absence of associated artifacts, and its relative isolation towards the westernmost side of the site suggest the possibility that it may have served as an animal pen or corral. However, it is also possible that the absence of associated artifacts is attributable to the rapid colluviation occurring in the area of this feature.

Structure F1 (Figure 7) - This structure is also a single room, four wall cobble house, although much smaller in size than E1. It is the westernmost feature on the site. F1 measures 12 feet N-S by 13 feet E-W, with mortared cobble walls that are ~28 inches wide and now have a maximum height of ~40 inches. An entry/door is located in the approximate middle of the downslope (N) side of the structure. This feature is overgrown with creosote and no associated artifacts were noted, although this fact is probably a function of the vegetation.

Structure G1 (Figure 8) - This feature consists of the low cobble foundations of a wooden building which, judging from the charred timbers and charcoal, burnt at some point at this locale. It is the southernmost structure at Cobble City, and therefore the highest up slope. The

foundations measure 34 feet N-S by 15 feet E-W, and are highest at the downslope (N) end, where they currently reach 36 inches in height, receding to ground level at the southern end. Considerable structural debris is located along the eastern side of the foundations, including nails, burnt wood and broken and (in some cases) melted glass. We also noted a ceramic light bulb socket with an 1890 patent date embossed on it, indicating that this structure had electrical lighting. Although there is some modern debris at this location (it is immediately alongside an existing dirt road), the majority of the remains appear early twentieth century in age. The unmortared cobble foundations of this structure are similar to ones noted as portions of standing wooden structures at the Wegmen complex (CA-KER-4447H; see below): in some cases these served as true foundations, upon which floor joists rested; in other cases these piles of cobbles appear to have served instead as wall edgings. That is, they helped to keep the walls of the structures in place, with floors that rested directly on the ground. In the case of Structure G1, the extant cobble walls are clearly intended to create a flat surface on sloping ground, and therefore most likely served as true foundations, rather than wooden structure edgings.

Structure H1 Complex (Figures 9 and 10) - This feature, located at the southern end of the site, consists of a complex of four rooms abutting a

terrace complex to the north and a privy. The overall dimensions of this complex are 52 feet N-S by 48 feet E-W. In fact, this complex consists of three primary proximate structures, forming four rooms. On the west is the largest of the three, which is 40 feet N-S by 15 feet E-W. It consists of a large single "back" room (32' by 15'), made of unmortared cobble walls that are 28 inches wide and a maximum of 44 inches high. At the far (S) end of this room three decomposing wood barrels are still in place. A partial dug-out forms a small (8' by 12') room immediately to the north of this larger room. The sides of this dug-out are made of large metal cyanide cans (rectangular in shape) that have been filled with dirt and stacked up. Two gable front, mortared cobble and interior plastered and whitewashed single room structures are located immediately to the east (Figure 10). The building that forms the central structure in this complex is 22 feet N-S and 12 feet E-W. The building immediately east, which is the easternmost portion of this complex, is slightly larger: 21 feet N-S by 15.5 feet E-W. It abuts a small but steep banked arroyo immediately to its east. The central of these structures currently lacks a north wall, which most likely has fallen; the easternmost structure has a door in its northern wall, and windows on the northern, eastern and southern sides. In both structures there are remnants of the original roofing: wood beams covered with flattened metal cyanide cans. These are embossed with "THE ROESSLER & HASSLACHER CHEM. CO" over "NEW YORK" on one side, and

"CYANIDE PURE" on the other. Charred window headers and sills, along with a considerable amount of charred wood within these two structures, indicate that they burned at some point. Artifacts associated with this complex are early twentieth century in age.

Structure II (Figure 11) - This feature is a small complex consisting of a large, single room building with an associated cellar at its southwestern corner, located at the southern end of the site. The building is 20 feet N-S by 12 feet E-W, with a door on the north wall, yet it is side gabled, and has windows on the west and east walls. The walls are mud mortared fieldstone cobbles (unplastered) and are ~18 inches wide; current maximum height of the walls is 54 inches from the floor of the room. The roof of this structure is laying in a scatter immediately to the west. It consists of a 4"x4" gable beam and one inch thick planks that are ~8 - 10 inches wide and 49 inches long, covered with corrugated sheet metal and flattened cyanide cans. The beams and planks are charred, indicating that the structure burned at some point. The associated cellar is semi-subterranean, having been dug into the slope to the south. It is eight feet N-S by five feet E-W, and is covered by a ground-level roof made of wood and metal and covered with dirt. A small door opens to the north. However, the cellar is collapsing, and we could not examine its interior. Artifacts associated with this complex are early twentieth century in age.

Structure J1 Complex (Figures 12 and 13) - J1, located at the southwestern side of the site, is the most complex arrangement of rooms at Cobble City. Depending upon how one classifies a "room", it contains between five and eight separate rooms, and appears to have developed from a rather haphazard accretion of abutting walls and rooms, rather than through a single planned construction event. The rooms range from two adjoining, 12 by 12 feet rooms, to a large low walled room, about 20 by 25 feet in size, to a kitchen area that is 12 by 20 feet in dimension. Generally, the walls of this complex are made of mud mortared cobbles; the northernmost room in this complex, which apparently is the kitchen area, has also had its interior walls plastered and whitewashed, and has a built-in shelf unit, made of wooden crates, set-into the southern wall (Figure 13). An accumulation of ash, charcoal and calcined bone in the southwestern corner of this room suggests that a stove or hearth was once placed in this spot; most likely a metal wood-burning stove. (In fact, a four burner, sheet metal stove is located in the southernmost of the rooms that comprise J1; whether or not this was used in the kitchen area or instead where it currently rests is, of course, unknown). Four of the rooms maintain portions of their collapsed roofs, consisting of wood beams, corrugated metal and flattened cans. Given the density of the rooms at this location, it is not surprising that three privies are located immediately

nearby. Artifacts associated with this complex are early twentieth century in age.

Structure K1 (Figure 7) - Structure K1, located in the central - western portion of the site, consists of a small, three walled structure and associated, cobble edged terraced pad. The three walled structure is a partial dug-out, opening to the north (downslope), with mud mortared cobble walls that currently reach a maximum height of 48 inches. It measures 12 feet N-S by eight feet E-W. The terraced pad, immediately NE of the dug-out is 23 feet N-S by 14 feet E-W. The metal portions of a wooden sea chest were present on this pad, including an ornate clasp embossed with "PAT'D OCT. '71". Other artifacts associated with this structure are also early twentieth century in age.

Structure L1 (Figure 14) - This is a large terraced pad, located towards the western side of the site. The pad, which measures 30 feet N-S by 36 feet E-W is unedged, but nonetheless is clear in form because it required leveling the slope, and cutting into the up slope, southern side. Two privies are located at the eastern corners of this pad, both of which are cobble edged depressions. The northern of these still has a standing southern wall, which consists of the wood frame of a slant roof structure that was 64 inches high to the east, 52 inches high on the west, and 55

inches wide; clearly, the door to this privy was on the east. A scatter of wood and tin privy parts are located near the SE privy. A low density scatter of early twentieth century artifacts is present on the pad, including a series of Car Hearts brand metal overall buttons. The size of this feature and the presence of two privies here suggests that it was more than simply a tent pad. The absence of any other structural remains suggests that a freestanding wooden structure may have once been present at this spot; that is, one on a wooden foundation. According to Mrs. Grace Meehl (personal communication, 1995), who was born and grew up on Soledad Mountain, a number of wooden buildings were moved off the mountain to the town of Mojave when the mines closed. It is possible that such pertains in the case here.

Structure M1 (Figure 15) - This is a complex of two structures made with mud mortared fieldstone cobbles, connected by a leveled and edged terrace pad, and located in the central - western portion of the site. The southern (up slope) of the two structures consists of two connected rooms: a large, open fronted room to the north that is 14 feet wide (E-W) and 14 feet deep (N-S) with a curved west wall; and, at its southeast corner, a small dug-out cut into the back slope that is 7 by 7 feet in size. Maximum height of the walls of this structure are currently 58 inches. We noted wire cot mesh within the dug-out, suggesting that it served as a sleeping

alcove. Portions of the collapsed roof, made of wood and corrugated sheet metal, are also present in this alcove. The second structure is located on the northwestern corner of the pad and consists of a small single room dug-out with mud mortared cobble walls. These reach a maximum height on the exterior of 30 inches, but were obviously higher from the interior floor, which is currently covered with a collapsed sheet metal roof. The pad area is edged with a dirt and cobble berm around its southwestern corner. In addition to a variety of miscellaneous metal artifacts, including portions of a stove pipe, we noted a number of metal grommets, probably tent grommets, on the pad, suggesting that a tent may have been placed here. Artifacts associated with this complex are early twentieth century in age.

Structure N1 (Figure 16) - This is a crudely built feature consisting of a three walled, one room structure, opening to the north, which overlooks a small terraced pad. The walls of the three walled building are crudely stacked unmortared cobbles, currently four feet high. It measures 20 feet N-S, but its E-W dimensions are 20 feet, along the north side, and 18 feet along the south. A small retaining wall separates it from the terraced pad, which is 13 feet wide (N-S), but varies from 20 feet E-W at the south to 16 feet E-W along its north border. It is edged along its east and west walls with loosely stacked low cobble walls. A small rock edged depression is

located along the east wall of the three room structure; this is either a small dug-out or a privy, although it does not really resemble other examples of these features found at the site. Artifacts associated with this structure are early twentieth century in age.

Structure R (Figure 17) - This is an unmortared single room cobble wall enclosure located on the northeastern side of the site. It measures 16 by 16 feet. The eastern wall is partly fallen, but appears to have contained a door or entry way. The walls are currently four feet high and two feet wide. Two narrower abutments, also made of unmortared cobbles but one foot wide, project to the east for five feet from the Ne and Se corners of the building. Although this structure resembles many others on the site in terms of construction techniques, a concentration of sanitary seal tin cans is located immediately to the west. As with the other structures on the northeastern side of the site, this reflects the Depression era use of this portion of the site (see below).

Structure S (Figure 18) - Also in the northeastern section of the site, this feature consists of a three walled structure abutting a terraced pad. The structure consists of a mud mortared cobble wall that is one foot wide and now 18 inches high, with the opening to the structure on the east and a possible door (or perhaps just collapsed wall section) along the south

side. The structure measures 13 feet N-S by 18 feet E-W. A small concrete pad, four feet N-S by 52 inches E-W, is located just off the southeastern corner of the structure. The terraced pad extends another 20 feet east from the opening of the three walled room. The pad area and room contains a moderate concentration of Depression era and later remains. These include aerosol spray cans (post-1947 in age; Rock 1987); a tubular steel chair frame (post-late 1920s); sanitary seal cans; and a metal wall hanging paper towel dispenser, embossed with "EVERGREEN" over "SPRUCE" over "ROBERG PAPER AND FIBRE CO." over "GREEN BAY, WIS." ; along with a considerable quantity of broken glass. There is also a significant amount of charcoal and melted glass, indicating that the structure burned.

Structure S2 (Figure 17) - Also located in the northeastern quadrant of the site, this is a terraced pad edged with a single coarse of unmortared cobbles. It measures 10 feet N-S by 26 feet E-W. Like the other features in this portion of the site, this structure contained a moderate density of Depression era and later remains. However, we also noted the metal remnants of an Engineer's scale, and the metal back-plate of a pocket watch. This is engraved with the following makers inscription:

MFD. BY THE ANSONIA CLOCK CO
NEW YORK, U.S. OF AMERICA
PAT. APRIL 17, 1888

Again, the features in this portion of the site appear to have been first constructed around 1903 - 1904, like the other features on the site, but to have experienced reuse during the Depression and subsequently. It is most likely that this watch back plate dates to the initial use of this feature after the turn of the century, although it is also possible that it was deposited at this feature more recently.

Structure T (Figure 19) - Located in the northeastern quadrant of Cobble City, this feature is a one room, mortared cobble wall structure with associated terraced pad. The building measures 13 feet N-S by 15 feet E-W, has interior plastered walls that are 18 inches wide and currently four feet high, with a two foot wide window on the west wall and a doorway on the east. A 55 gallon metal drum, laid on its side, has been bricked-in along the northeast exterior wall. This was apparently used for water storage, with a short pipe extending to the north. The terrace extends 16 feet to the east and 6.5 feet to the north of the structure, with a cobbled retaining wall running along the south (up slope) side. Like the other structures in this portion of the site, associated artifacts are largely Depression era or later. However, we noticed fragments of an electrical insulator and a metal, screw-in light bulb base, suggesting that the feature may have been electrified during the Depression. A Depression era dump,

V, is located to the southeast of the structure.

Structure U (Figures 20 and 21) - This feature is a single room building constructed with mortared fieldstone cobbles. It measures 13 feet N-S by 14 feet E-W, and has windows on its north, south and west walls, with a doorway on the east (Figure 21). The interior walls of this building are plastered and were whitewashed. They are two feet wide and, in places, seven feet high; indeed, the lintel over the doorway (a wooden header capped with fieldstones) is still in place. Burnt roofing materials litter the floor of the structure, suggesting that it was burned. A terraced pad surrounds the structure on its north, east and south sides. This is edged with a single course of unmortared cobbles. A cobble lined walkway runs from the terrace a few feet to the north, to the remnants of an old E-W road bed, which appears to have been the primary historical access to the site. Artifacts associated with this structure are primarily Depression era or later in age, and include sanitary seal cans and two tubular steel folding chair frames. Like other features in this northeastern side of the site, this structure appears to have been inhabited during the Depression. A Depression era dump, V, is located to the northeast of the structure.

Structure V1 (Figure 22) - This structure is a semi-circular terraced

pad. Located on the west side of the small arroyo running through the site, it is situated in the central area of Cobble City. The pad has a maximum dimension of 40 feet E-W. It is edged with a single course of unmortared cobbles. An old road bed, which appears to have been macadamized or oiled at one time, enters or terminates at the east side of the pad; this is the same road bed that runs immediately north of Structure U (see above). Additionally, a cobble edged walkway extends northwards from the southeastern side of this pad up slope to Structure V2 (see below). This walkway is unusual in that it follows a sinuous path to this associated pad. With the possible exception of some fragments of milled lumber, there are no true structural remains on pad V1, although the moderate artifact density is sufficient to suggest that a structure of some kind, perhaps a tent, once stood at this locale. Associated artifacts are primarily early twentieth century in age, including lavender glass fragments, a bottle fragment with a hand applied lip, and hole-in-top cans. There are also a series of crown cap bottle tops. For glass bottles these were first introduced in 1897 (Polak 1994), revolutionizing the beer and soft drink industries. What is most notable about the crown caps at Structure V1 is simply the fact that they are more common here than on the remainder of the site, where remnants of wine bottles predominate as evidence of the alcohol preference of the site's inhabitants.

Structure V2 (Figure 23) - As implied above, this pad is associated with downslope structure V1 inasmuch as a cobble lined sinuous walkway connects the two. It is oblong, measuring 27 feet E-W by 15 feet N-S, and edged with a single coarse of unmortared cobbles. We noted tent grommets on the ground at this location, suggesting that it was used for a tent. However, the associated artifacts are somewhat mixed in age, including a blue California ware plate, lavender glass, a cold cream jar with "PONDS" over "4" and fragments of carnival or Depression glass.

Structure V3 (Figure 24) - This is an oddly shaped structure located in the central - northwestern portion of the site. It consists of two crudely built N-S walls that are a double coarse of unmortared fieldstone cobbles, currently two feet high maximum. These walls are eight feet wide at the southern end and 11 feet wide to the north. A cobble lined privy is located off center, at the northwestern end of this walled structure. Artifacts associated with this structure appear to be early twentieth century in age. Included among them is a false tooth bridge consisting of two molars.

Structures W & X (Figure 25) - This a complex of two walled structures with an intervening terraced pad, located towards the northwestern side of the site. Structure W, on the southeastern side of the

complex, is a small single room that is 11.5 feet N-S and 11 feet E-W, with a door opening to the north. Its walls are mud mortared cobbles that are currently 64 inches high and two feet thick. A small alcove is located along the eastern side of Structure W. This is made of a low coarse unmortared cobbles, currently two feet high. This alcove is five feet wide (E-W) and ten feet long (N-S). Structure X is located about ten feet NW of W. It is a three walled construction with unmortared cobble walls that are two feet high. It measures 20 feet (E-W) by 16 feet (N-S), and opens to the east; thus the openings of W and X both face out onto a common terraced pad area. In addition, a second terrace, in this case cobble edged, is located immediately north of Structure X. A small step leads down to this lower terrace. Artifacts associated with this complex are early twentieth century in age.

Privies - In addition to the structural remains described above, 12 privies were identified on the site (Table 1). With two exceptions, these are small (typically ~5 feet in diameter) cobble ringed depressions. The exceptions (V4 and V5) are slightly larger (8 by 8 and 6 by 6 feet, respectively), cobble edged U-shaped depressions, which may or may not prove to also be privies. The cobble edging of these various features resembles the cobble edging found at the standing privy at the Wegmen site (CA-KER-4447H; see below), which served as a footings against which

the privy walls were placed. In staking these and other features on the site prior to mapping, we noted that the site soil was very rocky colluvium, making digging quite difficult. We suspect that these privies, accordingly, are fairly shallow and therefore would have had a relatively short use-life. This being so, we also suspect that additional privies exist on the site but have not yet been located. We discern no clear pattern for the placement of the privies; many are located near to other structures. Certainly, no effort was made to keep the privies at a distance from the living area of the site. This last fact is a reflection of the general lack of any planned development for this habitation area. As is quite clear, it developed randomly.

Dumps - Dumps are of course important archaeological features, because they contain large quantities of artifacts. Unfortunately, real dumps in the sense of dense accumulations of trash were all but non-existent at Cobble City: only one true dump, V, is present. This is a small accumulation of trash, about 10 meters in diameter, located on the northeastern side of the site, on the east side of the arroyo that crosses N-S through the site. It is associated with Structures T and U and appears to be Depression era in age, as was the last occupation of these two dwellings. The remaining dumps recorded on the site (A2, F2 and M2) are in fact all moderate density surface scatters which clearly have no subsurface

components. They are located in and among the living structures on the site, and are clearly moving downslope over time. Indeed, A2 is located at the toe slope of the hill, which forms the northern end of the site, precisely where the grade flattens out (and hence where the pump house for the water works was located). It is likely that this accumulation of trash at A2 may in part simply represent the natural downslope concentration of materials at the slope break. Assuming that a denser dump or dumps once existed at the site, as the quantity of habitation structures suggest, it is likely that these were placed in the small arroyos found on either sides of the site, and/or in the southeastern corner of the site, which is now being buried by mill tailings from the Queen Esther.

CA-KER-4446H Summary - Cobble City can be characterized as a relatively dense concentration of small habitation structures, all of which appear to have been built around 1903 - 1904. The majority of these habitations appear to have been abandoned before the first World War; however, there is a concentration of structures and a dump in the northeastern quadrant of the site that were also used during the Depression era, and perhaps later. None of the structures on the site maintain their architectural integrity: all lack roofs and none have completely intact walls, although there is considerable variability in the degree to which the walls are preserved, both between structures and

within the same structure. A number of the structures appear to have been burned, though whether this occurred before or after site abandonment is unknown. Finally, there is considerable variability in construction techniques and structure lay-out, and no evidence of internal site organization. Given that the majority of these structures were primarily made of locally available building materials (fieldstone cobbles, mud mortar), with a minimum of imported, manufactured building supplies (sawn lumber, bricks), it is likely that these structures were built by the individual miners themselves, rather than by the mining company. This inference is supported when the structures from Cobble City are compared with those from the Wegmen complex (see below), which were provided as company housing by the Karma Mining Company. As recalled by Mrs. Grace Wegmen Meehl (personal communication, 1995), the Karma Mining Company spared no expense in caring for its staff. In contrast, the Queen Esther Mine, with which Cobble City was apparently associated, was noted for its corporate "frugality", which can be taken as a polite way of stating that they did little for their workers, leaving them to care for themselves on their own.

3.22 CA-KER-4447H (Wegmen complex)

A total of 30 features were mapped and recorded at the Wegmen site complex (Table 2). The Wegmen and Meehl houses, and associated shop and ranch outbuildings, as well as the Reymart-Fraction head frame, were in use into the 1990s, are not archaeological in nature and were not further considered during the fieldwork. The remaining 27 features include 15 structures/pads, nine privies and three dumps. These cover an area that measures 250 meters N-S by 185 meters E-W, or 46,250 meters square (Figure 26). However, the site area is in fact elliptical rather than square, so total site area is probably almost one-half less than the calculated figure. Furthermore, the archaeological features on the site are localized and dispersed, so the large majority this site area is actually devoid of archaeological remains. We discuss these features, in turn, below.

Structure A (Figures 27, 28 and 29) - This building is a standing three room, gable sided wooden cabin, located near the southern end of the site. It is unframed board and batten construction with tongue and groove interior wall paneling. The floors are tongue and groove planks, and the foundation is wooden pins and rock piers, with board and batten skirting. The roof is shake on the north side, and corrugated metal on the south

(Figure 28), suggesting that the structure was re-roofed at some point. A porch surrounds the cabin on three sides (N, S and E), with wooden steps leading to the porch and front door on the north side. It appears that an addition was appended to the west wall at some time; however, this has collapsed so its dimensions are unclear (Figure 29). The three rooms include a 7 by 12 feet living room and bedroom of the same dimensions, and a 6 by 12 feet kitchen/bathroom. A closet and small pantry are also present. All of the windows and other finishing features of the cabin are exactly the same dimensions, with features such as stove pipe holes appearing to be precut, suggesting that the cabin may have been prefabricated. The south wall of the structure is currently collapsing. Currently, the cabin is filled with a series of wood and wire mesh cots. Three privies are located northwest of the structure. Associated artifacts include a mix of early twentieth century and Depression era remains.

This represents one of a line of five such cabins that were built in 1904 by the Karma Mining Company to house their employees (see photos in W & S Consultants 1995a). According to Mrs. Meehl (personal communication), portions of the Wegmen family lived in various of these cabins during her youth, so they were occupied at least into the 1930s. Furthermore, the Wegmen house, per se, is an extensively remodeled example of one of these cabins. However, Structure A is the last remaining cabin still in its original architectural condition.

Structure A2 (Figure 30) - This is the southernmost feature on the site, and consists of an unmortared cobble building foundation. It measures 20 feet N-S by 43 feet E-W. Although it is in-line with and equidistantly spaced from Structures A, B and the Wegmen house, suggesting that it may represent one of the original row of five wooden cabins built by the Karma Mining Company, it is neither of the same dimensions nor the same orientation as these other structures, making such an inference uncertain. There are few artifacts associated with this structure although those that are present are primarily early twentieth century in age. However, there is evidence of burned timbers within the structure, suggesting that it may represent a burnt wooden building. A privy, located some distance to the west, is associated with the structure. A modern dirt road berm has disturbed the southeastern corner of the structure.

Structure A3 - This is an ambiguous feature located northwest of Structure A, which consists of an eight by eight foot, two feet deep pit. It is lined on its north and south sides with large rocks and has 2x8 timbers running across it. With the exception of two iron pipe fragments, no artifacts are associated with this feature, and it is unclear whether or not it is historical in age.

Structure B (Figure 31) - This is a collapsed wooden structure lying intermediate between Structure A and the Wegmen house. It appears to represent one of the row of 1903 - 1904 Karma cabins. Its current status is that of a pile of timbers.

Structure H (Figures 32 and 33) - This is a collapsing one room, wooden cabin located on the eastern side of the site. It measures 12 feet E-W by 13 feet N-S, and is wood frame with a gable front. The exterior wall is horizontal board and batten and the interior wall is vertical board and batten, with an intermediate tar paper moisture barrier. The foundation consists of an unmortared cobble wall around the exterior of the cabin walls; that is, the cobble walls served as footings rather than a foundation, per se. The cabin has no floor; instead, sheet linoleum was placed directly on top of dirt. The west and north walls have windows; the south wall has collapsed and the east wall, with the doorway, is collapsing, so the status of these walls vis-a-vis windows is unclear. The structure of course has no roof, although roof beams have fallen onto the floor. A metal and porcelain sink is located in the northeast corner of the structure, with a gray water drain leading to the outside; no other evidence of plumbing was noted. artifacts associated with this structure include a mix of early twentieth century and Depression era remains. However, it is clear that

this structure was constructed circa 1903 (see photos in W & S Consultants 1995a) and, like the other structures in this portion of the site, are the earliest habitation evidence on Soledad Mountain.

Structure I (Figures 34 and 35a) - This is a standing, one room wooden cabin, also located on the eastern side of the site. It is unframed board and batten construction, with no interior wall, and is gable fronted. It measures ten feet N-S by 12 feet E-W. The south wall has collapsed, but windows are present on the west and north walls, with the door on the east (Figure 35a). The roof consists of shakes over beams, although most of it is now missing. The floor consists of two inch thick planks of various widths and lengths over floor beams. These rest on a low cobble foundation. A mortared brick pad, approximately three by four feet in size, is located immediately southeast of the door, and may have served as a hearth area; the remnants of a sheet metal oven are located about 20 meters southeast of the structure, which may have once been placed on this pad. A deep depression, measuring 18 feet N-S by nine feet E-W and containing some wood framing, is present about 24 feet east of the building. It is unclear whether this represents an additional structure (e.g., a dug-out), or the caved-in collar of a vertical shaft (because of this latter possibility, we did not explore the bottom of this feature). A more or less continuous scatter of artifacts runs northwards from Structure I to H. As

noted with reference to this last structure, these are of mixed age but are predominated by Depression era remains. However, Structure I appears to be one of the buildings shown in the 1903 photo of the site (see W & S Consultants 1995a).

Structure K (Figure 35b) - This is an entirely collapsed wooden building, with the walls and roof having fallen-in on themselves into the structure, resulting in a rubble pile. The outside foundations of this building measure 15.5 feet N-S by 28.6 feet E-W. This "foundation" consists of unmortared fieldstone cobbles used as footings for the wooden walls. The walls are covered by shingle siding, with some of shingles scavenged from fruit crates. The collapsed roof appears to be wood beams covered with sheet metal, coated with a hot mop mixture of tar and gravel. This building fronts the old N-S road which ran along the Sections 5 and 6 boundary, and is probably illustrated in the 1903 photo of the site (see W & S Consultants 1995a). However, artifacts in and around this structure are largely Depression era, and the constructional alterations (e.g., shingle siding, hot mop roofing) suggest substantial use after the period of original occupation.

Structure L (Figure 36) - This is a small three walled structure located on the east side of the site. It consists of two walls of unmortared

cobbles and a third wall consisting of a rock and dirt berm. It is dug-out, and this berm wall is probably the back dirt from the excavation. The height of the cobble walls, from the interior dirt floor, is 64 inches, and these walls are two feet wide. The structure opens to the east and measures eight feet N-S by 12 feet E-W. A collapsing privy is located about 15 feet in front (E) of this structure. However, this privy appears relatively recent, and certainly does not date to the early twentieth century. No artifacts were found associated with this structure.

Structures N2, N3 and N4 (Figures 37 and 38a) - Structures N2, N3 and N4 are adjacent terraced pads, located on the eastern side of the site. N2 measures 27 feet N-S by 24 feet E-W, and is cobble edged, with a cobble retaining wall along its south (up slope) side. It contains a small cobble wall, shaped like the letter "F" when viewed from the north (Figure 38a), along its western side. This is made of mud mortared cobbles, and is two feet wide and four feet high. The function of this wall is unknown; although it creates a small three walled room, the size of this "room" (five by six feet) seems small for a habitation.

Structure N3 is located five feet north of N2. It is a cobble edged pad measuring 20 feet N-S by 18 feet E-W. A small rock edged depression, probably a privy, is located in its SW corner. Structure N4, located 45 feet W of N2, is a 36 feet (N-S) by 32 feet (E-W) terraced pad, and also contains

a cobble edged depression, which is probably a privy. Vegetation was thick on these pads, and few artifacts could be seen. We did notice a "POWELL" cast iron, rebuildable truck muffler associated with the pads, which is Depression era in age.

Structure N5 (Figures 38b and 39) - This structure consists of two abutting rooms made from unmortared cobble walls that are two feet thick and 3.5 feet high, located on the east side of the Wegmen complex. Overall, the structure measures 12 by 12 feet. The larger room, which is a three walled room opening to the east, measures eight feet N-S by 12 feet E-W. The smaller room opens to the north, appears to have four walls, and measures four feet N-S by eight feet E-W. Part of a sheet metal stove and some (modern) roofing metal were noticed associated with this structure.

Structure O (Figure 39) - Also located on the east side of the site, this is a small three walled structure with associated can scatter and privy. The walled structure open to the east, measures 15 feet N-S by 19 feet E-W and has unmortared cobble walls that are 20 inches high and two feet wide. The can scatter is circa five by 15 feet in size, and consists of hole-in-top cans and some ceramics; it is located immediately behind (W) of the structure. A small cobble edged privy is located immediately SW of the structure, within the can scatter.

Structure P (Figure 40) - This is a small terraced pad measuring eight by eight feet in size, edged by cobbles, and with a 2.5 feet wide opening or break in the edging to the north. Located on the east side of the site, it is associated with hole-in-top cans.

Structure X11 (Figure 40) - Located on the east side of the site, this figure consists of an unedged terraced pad, rock edged privy, and a scatter of hole-in-top cans, glass and whiteware extending towards the SE. The pad measures 6.5 feet N-S by 15 feet E-W. Included in the artifacts within the scatter is a whiteware bowl fragment with a green printed maker's mark consisting of a fleur-de-lis over "BELMAP". This is a mark produced by the Sevres China Company of East Liverpool, Ohio, which was in operation from 1900 to 1908 (Gates and Ormerod 1982:241), thus dating this scatter to the early twentieth century.

Privies - As noted previously, nine privies were found on CA-KER-4447H. One of these (Structure D) is still standing, and is a two room, three hole board and batten structure with a shake roof. The remaining privies, with one exception, are all shallow depressions with cobble edging; similar cobble edging is visible on privy D, with these cobbles serving as footings for the wooden sidings of the structure. The exception is a large privy hole

and fallen walls associated (or, at least, nearby Structure L). Based on construction techniques and the nature of the building materials evident at this privy, we believe it is relatively recent, if not essentially modern, in age.

Dumps - Three archaeological dumps were recorded on the site, along with two smaller can scatters associated with Structures O and X11 (see above). Two of the dumps (M and M2) are clearly Depression era in age, are located on the east side of the site, and appear to be associated with the Depression era occupation of Structure K, as well perhaps as some of the other cabins in this portion of the site. Given the proximity of these to the road and the eastern edge of the property, it is not surprising that one of these (M2) shows evidence of recent pot hunting. The third dump is located in the central portion of the site, and consists of a dense concentration of hole-in-top cans, with lesser quantities of broken glass and ceramics (Figure 41). These give the appearance of having been sorted, concentrated and purposely placed, as if recycling was planned for these materials. As discussed below, a number of examples of ceramics makers' marks were located within this dump. In general, however, it is clear that systematic trash and garbage control was practiced at this site, with the exception of the Depression era occupation of the eastern cabins. In this area there is a considerable scatter of miscellaneous artifacts

throughout the occupied area, as well as dumping near the habitation areas.

Wegmen Complex Summary - Judging from an analysis of early photos (see W & S Consultants 1995a), the Wegmen site contains the earliest habitation on Soledad Mountain. However, this area continued to be occupied into the recent past, so the features at the site tend to be temporally mixed. A series of standing wooden structures are present, and are in various stages of decay and collapse. Evidence suggests that these were reused, in some cases intensively, during the Depression. However, their initial construction, by the Karma Mining Company circa 1903, involved considerable use of imported store bought building materials. Indeed, we suspect that some of the cabins on the site were prefabricated structures. Furthermore, there is considerably more internal order and organization to this site than was found at Cobble City. Structures tend to line up at CA-KER-4447H in three rows: fronting the N-S section line road; then to the west in a row along the eastern side of the low ridge that divides the site; and finally in a western row that extends from the Wegmen house southwards and up slope towards the Karma Mill. In the case of the last row of cabins, photographic evidence documents the construction of these buildings in an intentional row (ibid). Furthermore, more care was taken in the placement of the privies at this site, which are

generally located to the west of the structures. Since most of the structures face east, this places them to the rear of the buildings. The Wegmen site complex, in other words, appears to have been a somewhat planned mining camp, which contrasts with the haphazard and random arrangement of Cobble City, immediately nearby.

3.23 CA-KER-4448H (Karma Mill)

As noted previously, the Karma Mill was burned in 1947, leaving only foundations and occasional artifacts. However, the original hoist house and some related structures are still standing, resulting in a series of essentially industrial features and remains at this site (Table 3 and Figure 42). These cover an area measuring 135 meters N-S by 85 meters E-W, or 11,475 meters square. We discuss each of these features below.

Hoist house area features - The most intact portion of the Karma Mill is the hoist house and related features, located near the haulage level adit at the top (S or up slope end) of the site. Indeed, these are sufficiently intact that they have been used in the last decade for a movie set, albeit the set constructors felt it necessary to paint the hoist house, to make it look "old". We consider this portion of the site in terms of three

components: the hoist house itself; the mine head frame and ore chute; and a series of outbuildings SE of the hoist house.

The hoist house (Figures 43 and 44) is a wood frame, board and batten gable front building measuring 24 feet N-S by 40 feet E-W. Existing photos indicate it was built around 1903 (see W & S Consultants 1995a). It is divided into three rooms. On the west is a machine room, which still contains a water pump and engine dating from the Depression era use of this structure which, according to Mrs. Meehl (personal communication), was conducted by her father, Engelbert Wegmen. The central portion of the building is the hoist room proper, which contains a series of concrete hoist stanchions, and ports through which cables would run to the head frame. On the east is a small work room. This eastern room was modified shortly after its construction to accommodate the turning radius of a narrow gauge line coming out of a haulage level adit immediately SE of the building. This required knocking-out the NE corner of the building, and supporting the roof line with an internal truss (Figure 44b).

The head frame (Figure 45) is a wooden two post frame with back braces, which abut the hoist house to the north. As such, it is relatively light weight, and was not constructed to carry major loads (cf. Peele 1941). In keeping with this fact, it contains only a single hoisting head sheave, or pulley, and appears to have been a front lift system. It sits over a vertical

shaft which contains a light weight metal cage.

A ramp and ore chute is located immediately north of the head frame. Although this likely incorporates scavenged material from the original trestle to the mill, it is nonetheless primarily modern: portions of the chute are made of used telephone poles, and an electrical Pacific jaw crusher (model KH-1, serial number 490) has been placed on a brick and concrete foundation, which is inscribed "8/13/80 BOB & MARIA BAILEY".

Immediately SE of the hoist house is a blacksmith shop within a collapsing sheet metal structure (Figure 46). This appears to be Depression era in age. To the SE of this structure is the haulage level adit. Immediately to the east of this adit is a concrete and metal structure of mixed age, measuring 18 by 19 feet (Figure 47). It appears to represent a sheet metal front building (Figure 47a), probably dating from the Depression era, which was added on to an earlier and smaller concrete structure (Figure 47b): among other things, the sheet metal building blocks off a small storage room in the concrete structure. Concrete assay scale pedestals and the remnants of fume hoods are present in the eastern side of this compound structure, where a front metal sided room opens onto the back concrete walled room. According to Mrs. Meehl (personal communication, 1995), her father Engelbert Wegmen ran assays from the Randsburg mines in these rooms during her childhood (presumably during the 1920s and 1930s), and their is assay debris present in these rooms.

Assay dump - A 1932 plat of the Karma mill (see W & S Consultants 1995a) shows the existence of a laboratory towards the NE of the hoist house area. This apparently is the location of the original assay office, which was a wood frame structure which presumably burnt at the time the mill, per se, burned in 1947. Evidence of this assay office is present in the form of a dense dump of assay debris (cupules, crucibles and slag; see Figure 46b), along with remnants of an unmortared cobble wall foundation, and burnt timbers. These are spread over an area approximately 20 meters E-W by 10 meters N-S.

Karma Mill - As noted a number of times above, the Karma Mill burned in 1947, leaving only its foundations and some remnant features. These cover an area that is approximately 250 feet N-S by 120 feet E-W (Figure 48). The mill area can be divided into four levels. The uppermost level (Figure 49a), at the southern (up slope) end of the mill, consists of a large pile of waste rock, probably dumped during the Depression; some remnant concrete and concrete and cobble foundations; and the 20 stamp mill stems, cams, boxes and batteries or mortar blocks (the wooden support framework for the stamps having burned). The stamp mills consist of four five-stamp sets, two of which are still standing on their concrete batteries (Figure 50). The stamp box of each of these five stamp

sets is embossed with "RISDON IRON WORKS" over "S F CAL" followed by a date (Figure 51). Three of these are dated 1890; the fourth is dated 1889. As noted in the historical review, these stamps were purchased used and set up in 1903. A fallen cam shaft behind one of these stamps is embossed "CANADA SELF-LOCKING CAM" over "PATENT MCH. 14., 1899". Stamp mills such as these were known as "California stamps", because they were commonly used at mines in the state (Richards 1909). They were gravity mills, in the sense that the cam lifted the stamp stems and shoes, and then let them drop by their own weight onto the ore resting on the anvil plate in the mortar box. Risdon was a common manufacturer of these stamps around the turn of the century; e.g., Risdon supplied the stamps for the Standard Mill at Bodie in 1899 (McDonald 1988:29).

In addition to the stamps, a large, V-shaped sheet metal tank is located at the northwestern side of the first level. This is labeled "DIMMICK SIZER" over "U.S. PATENT JULY 10 1900" over "JULY 10 1901" over "MEXICO PAT. MARCH 25 1902" over "108". This more precisely archaeologically dates the construction of the mill after 1902, thereby verifying the historical records. Sizers and classifiers were used to prepare the crushed ore for concentration. The Dimmick Sizer or Classifier is described by Richards (1909:248) as classifying "the pulp [crushed ore and water slurry] by allowing the grains to fall in a gradually moving current of water. The heavier grains drop out first, the lighter ones following".

The second level of the mill comprises the machine and boiler room. It is concrete floored and contains a series of concrete machine stanchions or foundations. One of these has an inscribed date, "July 17 1907", indicating that mill modification continued at least until mid-1907. The boiler is located in the SE corner of level 2. It consists of a metal braced, three wall brick enclosure measuring 20 feet N-S by 8'2" E-W, opening to the north. The boiler tank is currently missing, although an apparently smaller tank is located outside of the boiler room. The fire bricks in the boiler room are embossed with "LAFB Co" over three stars, presumably standing for Los Angeles Fire Brick Company. The fallen sheet metal boiler chimney stack is lying to the northeast of level 2.

The third level of the mill is the cyanide tank area, which consists of a large platform cut by sub-grade narrow gauge rail lines within five feet deep channels or alleys. This platform, with the channels and tracks leading to the tailings dump NE of the mill, supported seven large (24 feet diameter) and six small (10 feet diameter) tanks. These tanks were presumably wooden; all that is left of them are the metal bands (Figure 49b). A centrifugal water pump, embossed "BYRON JACKSON" over "MACHINE WORKS" over "S. F." over "#2", is present on the west side of this level.

The fourth and last level of the mill consists of three small platforms at the NW end of the mill; that is, out of line of the tailings dump. This

apparently represents the area of final processing and concentration, and consists of two small tanks, three rectangular vats (presumably zinc vats) and a furnace area. Since this is located some considerable distance from the assay office, our presumption is that this was for final ore refining.

Karma Mill Summary - CA-KER-4448H can be characterized as the foundation remnants of an early twentieth century mill, still containing some of its larger artifacts (such as the stamps), and related features, including an early assay dump, head frame, and hoist house with related structures. Although used into the Depression, the hoist house and head frame are largely intact and maintain their architectural integrity.

3.24 CA-KER-4449H (Queen Esther Mill)

The Queen Esther Mill (Table 3 and Figure 42) is located immediately west of the Karma. It extends to the north approximately 140 meters, and has a maximum E-W extent of 125 meters. This, however, creates an L-shaped area, with the majority of the archaeological features concentrated at the southern end. The features at this site are either dismantled, collapsing, or are being inundated by the downslope movement of mill tailings which, because of the slope at this locale is moving both north and eastwards, into

the lower portions of the mill complex. We discuss these features in terms of four components below: the mill structure; the tank building; the assay office area; and the asphalt dump area.

Mill Structure - The Queen Esther mill structure is a multi-story wooden and sheet metal building that is still standing, although just barely so (Figures 52, 53 and 54); it is sufficiently unstable that safety precluded intensive investigation of its internal structure. It measures 80 by 80 feet, and is L-shaped. An ore bin and jaw crusher is located at the top of the mill, at its southern end, and the boiler room is located on the southeastern side. It contains bricks embossed with "C.S.P. CO." over "LOS ANGELES"; and "CARNEGIE", indicating that different sources were used for the building materials for this structure. A large wooden ore hopper or bin is located at the north end of the mill structure. Three narrow gauge rail tracks emerge from this bin, two of which trend sharply west, towards the remnants of the tank building, and the other which heads towards two tanks immediately north of the mill.

Tank Building - Period photos of the mill (see W & S Consultants 1995a) show a long, low rectangular building extending west from the mill structure. This is the cyanide tank building, which was set-up at the same elevation as the mill, rather than downslope from the milling and

concentrating area, as is typical in most mills. This tank area currently consists of two components: an upper (southern area) of small tank pads, foundations and supports, and the tank building remnants, per se. Originally this building was 48 feet N-S by 190 feet E-W. The building has been entirely removed; given the absence of any remnant parts, burned or otherwise, it appears that it was dismantled. All that remains of tank building is the dirt terrace upon which it was built; a series of sub-grade channels or alleys cut N-S into the terrace; the bases of 12 metal tanks; and three fallen trestle lines that ran E-W through the building (Figure 54b). The sub-grade channels, which were used to clean the tanks and remove the mill tailings are six feet wide, with their entrances framed with three piece wood sets that are four feet high and five feet wide. The interiors of these channels consists of fieldstone walls shored with timbers. Electrical wires, insulators and fixtures run through these channels, so they were lighted. Given the location of these channels, mill tailing start immediately below this tank building.

The 12 tank remnants overlying these channels consist of metal tank bases, with cut sides about three inches high. Wooden slats 2"x1" in size cover tar and canvas linings over the tank bottoms, which have large punched drain holes in their middles. According to Mrs. Meehl (personal communication, 1995), the metal tanks on the mountain were all cut off by ranchers after the mills were abandoned, with the metal being recycled

into cattle watering troughs. These then are apparently the remnants of the metal tanks used for cyaniding the ore. A large tank, sitting on a free standing wooden foundation, is also located immediately north of the tank building; its function is uncertain.

The remnants of three wooden trestles cross the tank building. These were presumably used to fill the tanks with concentrated ore prior to cyanidation. Although essentially fallen, these trestles appear to have been about ten feet high, suggesting that the tanks may have been eight feet in height. Judging from their connectors on the mill structure, the trestles apparently supported narrow gauge rail, although this is now missing from the building area.

Assay Office Area - Three partially standing wooden structures are located north of the mill. Two of these are within about 200 feet of the mill building; the third is about four hundred feet downslope. It is completely enveloped by mill tailings, with only portions of its roof showing. It appears to have been gabled, with a sheet metal roof, and to have measured 18 feet N-S by 12 feet E-W. Its foundation consisted of wood flooring resting on wood pins. Two 4" riveted iron water pipes, originating at the two tanks at the northernmost end of Cobble City, pass on either side of this fallen building; one heading for the Karma Mil, and the other towards the Queen Esther. There are also a series of riveted

metal buckets, filled with tar, associated with the structure.

The two uphill structures are also being covered with tailings, though they are somewhat more intact. The best preserved of these is the southernmost wood frame structure. This is the Queen Esther assay office (Figure 55a), which is an unframed board and batten cabin of four rooms. It originally measured 20 by 20 feet in size, and appears to have been a gable front structure opening to the east but, because it is collapsing and filling with tailings, it is impossible to be certain. It sits on an unmortared cobble foundation.

The muffle furnace for the assaying operation is still standing in the northwest room of this cabin, which has lost its north wall. The muffle furnace is made with Denver Clay Company fire bricks, is 44 inches wide by four feet deep, and is 18.5 feet high to the top of the stack. A small scatter of assay debris is located immediately outside of this room (presumably there was a window in the missing wall). A series of more substantial assay dumps are located east of the structure, essentially at an arm's throw from the front door of the building.

A large unframed board and batten structure is located 14 feet north of the assay office. This has fallen and been enveloped by tailings, but apparently was 42 feet N-S by 22 feet E-W. It appears to have had tongue and groove planks flooring, with wooden floor beams resting on an unmortared cobble foundation. The roof of this building may have been

flat, and it is impossible to tell whether it was divided into internal rooms.

Asphalt Dump Area - An area of asphalt dumps, small tank foundations, and fallen structure foundations is located E/NE of the mill building proper. This includes a wooden platform over a low metal tank, supporting another metal tank above; a metal tank base supported by a cobble retaining wall; the floor and foundation of a wood structure; a small cobble structure; and a large dump of asphalt. The wood structure foundation, on the easternmost side of the site near to the road between the Karma and Queen Esther, consists of tongue and groove plank flooring supported by wooden pins, and measures 13 feet N-S by ten feet E-W. A small metal gas line is associated with this structure. The cobble structure is seven feet south of this wood floor. It is made of unmortared cobbles, is ten feet long (NW-SE) by eight feet (SW-NE), and contains the remnants of a large wooden barrel, filled with asphalt or tar (Figure 55b). The walls of this structure are three feet high and 14 inches wide.

A very significant dump of asphalt/tar is located between these two structure remnants and the mill. This includes large, solid heaps as well as liquid pools. The purpose and significance of this asphalt dump are uncertain. A number of the old roads on this side of Soledad Mountain were macadamized, so it may have been used for road work. We also noticed that areas of the tailings pile immediately below the tank building

had a coating of asphalt, so it is possible that this asphalt was used to aid the movement of the tailings downslope more quickly (especially in that it is obvious that the tailings also moved laterally to the east into the mill complex of buildings). This asphalt dump may also represent the less volatile remnants of low grade petroleum that might have been used as a cheap fuel for some of the mill machinery, such as the boiler furnace. This is, of course, conjecture. What is obvious, however, is that a substantial amount of asphalt was stored on the site and why so much was brought in here is somewhat of a mystery.

Finally, a dump of machine shop debris is located immediately east of the boiler room. This contains numerous scraps of iron and metal, and broken tools, mixed in with the asphalt that is ubiquitous in this portion of the site.

Queen Esther Mill Summary - The Queen Esther Mill can be characterized as the remnants of an early twentieth century mill that has largely lost its integrity. Portions of the site, such the mill structure and some of the dumps, however, retain archaeological interest.

3.25 CA-KER-4450H (Echo Mill)

A third mill complex, dating between 1903 and 1905, is located towards the northwestern side of Soledad Mountain. This is the Echo Mill, which was dismantled circa 1906. Extant features at this site currently cover an area extending 100 meters N-S by 150 meters E-W (Figure 56); however, the early twentieth century remains are concentrated in the northern half of the site, with features to the south consisting of modern mining remains and a circa 1940 concrete foundation, built as part of the Golden Queen operation. We consider here the earlier archaeological remains, which we discuss below in terms of two components: the mill area; and related structures and features to the east.

Echo Mill - As is evident from period photos of the Echo Mill (see W & S Consultants 1995a), this was a relatively small (and, of course, short lived) structure, relative to the other mills on Soledad Mountain. Archaeological remains of the early twentieth century mill, correspondingly, are restricted to an area about 50 feet N-S by 80 feet E-W in size (Figure 57). The mill area consists of three levels. At the top (S), immediately adjacent to an old dirt road (that once led to the Elephant-Eagle claims to the NW, but is now covered with waste rock), are three concrete stanchions and two concrete lined pits. These presumably served

as foundations for the trestle that ran from the haulage level adit into the mill. The second level of the mill, 8.5 feet below the first, is a large rectangular terraced pad cut into the hill side (Figure 58a). It measures 40 feet N-S by 44 feet E-W, and is supported to the north by a cobble retaining wall. It is dirt floored, though it once presumably supported a wooden floor that was removed when the mill was dismantled. To the north of this pad is the third level of the mill, which consists of a large open area, three feet lower than the terraced pad. This contains a series of 19 low concrete machine stanchions in the center and, at the northeast extreme of the mill area, mortared cobble walls forming a three walled enclosure, opening to the west (Figure 58b). These walls are currently six feet high, and most likely held the boiler room for the mill. A pit for a 15 feet in diameter tank is located six feet behind (E) of this walled structure. A second area of concrete machine stanchions is located about 30 west and up slope of the second mill level (Figure 59a). This contains three large concrete foundations, at least one of which held a fly wheel.

Eastern Features - In addition to the features comprising the original mill remnants, three other features were noted to the east of the mill. These consist of a leveled pad; a scatter of assay debris further east (Figure 59b); and, near the modern paved road, a cobble edged privy depression. The leveled pad measures 12 feet N-S by 20 feet E-W, and is located due

east of the "boiler room". A flat concrete pad measuring seven feet N-S by eight feet E-W is located on the NW end of this pad, but no other structural features were noticed, and nearby artifacts were Depression era/modern in age. The assay room dump covers an area about 20 feet in diameter, and has been heavily disturbed: we noticed three pot hunters' pits in the scatter, and a bulldozer has driven through the middle of it. No structural remains could be identified near this small dump. Likewise, we found no associated structure near the privy.

Echo Mill Summary - The extant remains of the 1903 - 1905 Echo Mill consist of the barest remnants of the mill structure, and a few fragmentary aspects of related structures that once stood at this short lived site. As is clear from the nature of these remains, when the Echo Mill was dismantled, anything that was movable was taken away, leaving only the minimum behind.

3.26 CA-KER-4451H (Golden Queen Mill)

The Golden Queen Mill, built in 1935 and dismantled around 1950, is sufficiently recent in age that considerable documentation on it exists, including original accounting records, summarized earlier; a published flow

chart for the mill operation (Tucker 1935:479); and a scale plan of the mill structure, which we include here as Figure 60. This compares with a map of the archaeological features on the site (Figure 61; see also Table 4), which are limited largely to concrete foundations, tanks and drums, and related ore chutes and bins, the main concentration of which cluster in an area that is 200 feet N-S by 400 feet E-W.

The ore chutes are of two kinds. At the mill itself they consist of a series of long concrete structural remains that abut the primary and secondary crushers, which were Taylor gyratory crushes (ibid). The ore chutes and crushing areas have been burned, have had any removable parts taken away, and are starting to decompose (Figure 62a). Not shown on the two above referenced maps are the truck ore chutes that were associated with the operation of this mill, but are located elsewhere on the mountain. These include three wooden ore chutes lying within the Independent Claim, which is uphill from the Karma Mill but which was worked by the Golden Queen during the late 1930s and early 1940s and, therefore, are correctly part of this site; the Soledad Extension workings, recorded as part of the Bobtail Area features; and most likely the Gypsy-Starlight and Silver Queen sites (see below). In general, these wooden ore chutes, like the concrete chutes at the mill proper, are in various stages of collapse.

Immediately below the chute and primary crusher levels at the mill is the grinding and classifying area, which employed Marcy ball mills and Dorr classifiers. The archaeological remnants of this grinding and classifying process consist of a concrete foundation and series of machine stanchions (Figure 62b). The concentrated ore then was moved to lixiviation in large metal Dorr agitator tanks. These are still standing, as shown in Figure 63a). Finally, the pregnant cyanide solution was cleaned and separated in two Oliver drum filters, which are also standing on the site (Figure 63b). the only remaining standing structure within the mill complex is the concrete refinery room, at the NE side of the site. The remaining features within the Golden Queen mill complex are various ancillary structures in different stages of collapse.

Golden Queen Mill Summary - The remains at the Golden Queen Mill consist entirely of industrial mining remains. Although constructed in 1935, the mill was dismantled about 40 years ago, and currently lacks any form of integrity.

3.27 CA-KER-4452H (Silver Queen)

The Silver Queen mine area is located SE of the Golden Queen and its discovery was the impetus for the Golden Queen operation. However, the extant features at this site (Figure 64; see also Table 4) appear to largely post-date the Depression era workings on the mountain; thus they are most likely 1950s or later in age, and not of archaeological interest. They include a glory hole and ore chute at the southern end of the site. A series of features are clustered below the glory hole, on a large pile of waste rock, that itself probably dates to the Depression era workings.

These latter remains include a collapsed wood frame building, measuring 15 by 25 feet; a sheet metal sided privy perched on the edge of the waste rock dump; and a scavenged wood, single bin ore chute. These are associated with a concrete haulage level adit portal (leading to the glory hole), which is painted "VARGA MINING"; a short narrow gauge rail line leads from the adit to the truck chute. But inasmuch as these features are superimposed over the major Depression era waste rock dump activities, it is clear that they must post-date the Depression. Since "Varga Mining" has no known association with the Golden Queen operation, it is most likely that these remains post-date the Golden Queen operation, and thus may date from the late 1950s and 1960s. Finally, at the northernmost end of

the site we recorded two concrete machine stanchion areas, associated with an adit. One of these consists of two machine foundations within a three walled concrete structure measuring 24 feet by 10 feet in size. The second consists of two 8 feet long, freestanding but adjacent concrete machine foundations.

Silver Queen Summary - The Silver Queen area features are industrial mining features, were determined to be essentially modern in age, and thus are of little archaeological interest.

3.28 CA-KER-4453H (Gypsy Starlight)

The features found at the Gypsy Starlight site are shown in Figure 65 (see also Table 4). These are all Depression era or later in age. They include an abandoned sheet metal, V-shaped tank classifier, similar to the Dimmick Sizer at the Karma Mill (Figure 66a); two wooden waste rock trestle dumps; two collapsing truck ore chutes (Figures 66a, 67a and 67b); and a small quantity of Depression era or later remains running down the side of the larger waste rock dump. The ore chutes and waste rock trestles are all in a state of near-complete collapse. These dump consists primarily of a small concentration of mining debris (pipes, timbers, wire spools) thrown down

the side of the waste rock pile, but also includes a small quantity of sanitary seal cans.

Gypsy Starlight Summary - The remains at the Gypsy Starlight site consist of industrial mining features, dating to the Depression era or later. They are essentially all lacking in integrity.

3.29 CA-KER-4454H (Bobtail Area)

The Bobtail Area features site (Figure 68; see also Table 4), consisting of a dispersed series of mining features on the west side of Soledad Mountain, is only partly within the current study area, with only four of the features recorded as part of this site of concern. These four features have been designated B5, B6, B7 and B8. We discuss these in turn below.

Feature B5 - This consists of a Depression era or later truck ore chute. It is a single bin, made from wood scavenged from earlier constructions (as demonstrated by the odd sizes of the lumber, and the presence of preexisting holes and fittings), and is 17 feet long, nine feet wide and 9.5 feet high. Given its location downslope from the Gypsy Starlight site, it may have been associated with the working of the

Starlight claim during the Depression and/or after the war.

Feature B6 - This is a concrete pad which served as the machine room/compressor house for the Soledad Extension Mine, which was operated by the Golden Queen during the late 1930s and early 1940s, and the haulage level adit to which is adjacent to this feature. This feature consists of a poured concrete pad measuring 34 feet N-S by 20 feet E-W. It contains two concrete machine stanchions in the SE corner, and has electrical conduit emerging from the floor. With the exception of broken glass and an occasional nail, there are no artifacts associated with this feature.

Feature B7 - This is a small cobble structure made of unmortared fieldstone cobbles that form a wall two feet wide and five feet high. The walls form a U-shaped structure, with the western wall 10 feet in length, the central (northern) wall eight feet long, and the eastern wall five feet long; the south, which is up slope, is open. No artifacts could be found in association with this structure, although the immediately surrounding area has been heavily disturbed by road construction. In terms of architecture and construction techniques, however, the structure resembles the early twentieth century buildings at Cobble City.

Feature B8 - This is a small wood and metal head frame/hoist over an open stope. It is apparent that it is made out of cannibalized parts. It is also apparent that this hoist was never used, as it is designed in such a way so as to guarantee that the cable will ride off the pulley sheave if engaged. It is attached to a dead man made of 55 gallon drums on the slope below. This feature appears to be modern in age.

Bobtail Area Summary - The features within the study area falling in the limits of the recorded Bobtail Area site consist of a mix of industrial mining features that are probably unrelated temporally or functionally. They also tend to lack any concentrations of artifacts allowing for certain temporal assignments.

3.3 Excavation Results

In addition to mapping, recording and surface collecting test excavations were also conducted to determine whether subsurface deposits are present at these sites, and to characterize such deposits if present. The results of the test excavation, per each site, are summarized below.

3.31 CA-KER-4446H (Cobble City)

Excavation units were excavated in the following features on this site: H1 privy; H1 east structure; J1 privy; J1 kitchen area; M1 privy; V dump; V2 pad; and V3 privy. We discuss these results of these excavations in general terms below.

Unit 1 (H1 privy) - This unit contained cultural remains to 30 cm depth, at which point a dense concentration of sterile colluvial rock debris was encountered. The relative shallowness of this privy is typical of these features at this site, which sits on a rocky slope with a very thin mantle of top soil. Soils in this unit were silty sand, with mill tailings mixed in. They are Munsell 7.5 YR 6/2, pinkish-grey.

Unit 2 (H1, east structure, floor) - This unit was placed in the floor of the easternmost structure in this complex.. Soils in this unit were derived from the mud mortared and plastered walls, combined with blown in eolian sands and tailings. They were 10 cm thick, at which point a burnt wood plank floor was encountered. The soils were Munsell 7.5 YR 6/6, reddish yellow.

Unit 3 (J1 privy) - As with Unit 1, cultural material extended only to

30 cm in this unit, at which point sterile rocky colluvium was encountered. Soils in this unit are sandy rocky colluvium, and are Munsell 7.5 YR 5/4, brown.

Unit 4 (J1 kitchen) - This unit was placed in what was believed to be the hearth area of the north easternmost room in the J1 complex, which is thought to be a kitchen. Cultural material was present in sandy colluvium, derived from wind blown fines and wall mortar, to 10 cm depth, at which point a packed, culturally sterile dirt floor was encountered. At 20 cm a dense concentration of colluvial cobbles was encountered. Soils in this unit were Munsell 7.5 YR 7/6, reddish brown.

Unit 5 (M1 privy) - Bedrock, or at least a very large fieldstone boulder, was encountered at 40 cm below ground level in this unit, which represented both the maximum depth of the cultural material, and the privy itself. Soils were sandy rocky colluvium, and were Munsell 7/5 YR 4/4, brown.

Unit 6 (V dump) - This unit was placed within the Depression era dump on the east side of the arroyo, near the Depression era habitation in the northeastern quadrant of the site. This proved that this dump was primarily a surface deposit, with little subsurface deposition: the majority

of the remains were recovered in the top 10 cm of the unit, with a smaller quantity in the 10 to 20 cm level, but most of which derived from the top half of this level. Soils were entirely sterile below 20 cm, and bedrock was encountered at ~25 cm. Soils were very sandy mine tailings, and were Munsell 7.5 8/4, pink.

Unit 7 (V2 pad) - A very small quantity of remains were recovered in the top 10 cm level of this unit, indicating that no subsurface deposit is present at this locale. Soils were sandy colluvium, Munsell 7.5 YR 5/4, brown.

Unit 8 (V3 privy) - This unit was excavated to bedrock at ~30 cm. Cultural materials were present throughout this depth, although in low quantities. Soils were silty sandy colluvium, Munsell 7.5 YR 5/4, brown.

Cobble City Summary - Test excavations at Cobble City demonstrated that subsurface deposits are present but are very localized and shallow on the site. Generally, the presence of high bedrock has resulted in privies that are only about 30 cm (one foot) deep. This would suggest that there should be a large number of privies on the site, since they would fill fairly rapidly. A thin layer of buried material also appears to be present within the structures, although this looks to be limited to about 10 cm in depth.

The terraced pads and dumps, on the other hand, are apparently solely surface manifestations, with no subsurface deposition to any consequential degree.

3.32 CA-KER-4447H (Wegmen complex)

Four units were excavated at this site. These were placed in the structure A2, A4 and O privies, and the M dump. They are discussed below in turn.

Unit 1 (A2 privy) - This unit was dug into culturally sterile colluvium, encountered at 70 cm below ground level. cultural materials were present to this depth. Spoils consisted of silty sand, Munsell 7.5 YR 5/4, brown.

Unit 2 (A4 privy) - This unit was placed in one of the privies associated with Structure A, the standing wood cabin dating from 1904. It was excavated to 100 cm in depth, at which point excavation was stopped because it was impossible to dig any deeper, given the size of the excavation unit (0.25 by 0.25 m). However, cultural materials were present throughout these levels, with the top ~40 cm having minimal materials and a considerable quantity of rocks, and the amount of cultural

debris picking up dramatically below that depth. Soil density and color also changed at that level, with a lens of ash and organic material evident in the sidewall. However, the matrix soils is primarily rocky, sandy silt, Munsell 7.5 YR 5/4, brown, with the ash lens 7.5 YR 4/2, dark brown.

Unit 3 (M dump) - This unit was placed is a dump associated with Depression era habitation on the east side of the site. It was excavated to sterile rocky colluvium, at 30 cm. Cultural material was present to this depth. Soils were rocky colluvium, Munsell 7.4 YR 4/2, brown.

Unit 4 (O privy) - Located on the east side of the site, this unit was dug to bedrock at 20 cm. Cultural materials were present throughout the two levels of the pit. Soils were rocky colluvium, Munsell 7.5 YR 4/4, brown.

Wegmen Summary - Subsurface deposition is variable at this site: on the west side of the site the privies are fairly deep, whereas the east side of the site sits upon an area of high bedrock. Even when cultural deposition occurs in dump areas here, the deposits are shallow.

3.33 CA-KER-4448H (Karma Mill)

A single pit, designated Unit 1, was dug on this site. It was placed within the upper assay office. Soils were present in this room to a depth of 10 cm, at which point a wood plank floor was encountered. A small quantity of cultural material was present within this thin soil lens. This soil is aeolian sand, Munsell 7.5 YR 6/4, light brown. A thin, localized subsurface deposit is present, therefore, within some of the structures at this site.

3.34 CA-KER-4449H (Queen Esther Mill)

As with the Karma, a single pit was excavated at this site. It was placed in an assay dump and was dug into sterile sand, encountered at 30 cm. However, cultural materials were limited to the top 20 cm of this unit, indicating that thin, localized subsurface deposits are present at this site. Soils in this unit are silty sand derived from tailings, Munsell 7.5 Yr 7/6, reddish yellow.

3.35 CA-KER-4450H (Echo Mill)

Two units were excavated on this site, each of which is discussed below.

Unit 1 (Assay dump) - This unit was placed in the assay dump area on the eastern side of the site. Cultural materials were present to 30 centimeters in depth, below which sterile colluvium was encountered. However, this area was highly disturbed by pot hunting and bulldozer activity. Soils in this unit were sandy colluvium, Munsell 7.5 YR 7/4, pink.

Unit 2 (Privy) - This pit was placed in the privy located at the eastern extreme of the Echo Mill site. Cultural materials were recovered to 50 cm, at which point sterile rocky colluvium was encountered. The soils in this unit were sandy colluvium, Munsell 7.5 YR 7/4, pink.

Echo Mill Summary - Test excavations demonstrated the presence of subsurface materials at this site, albeit in localized areas, one of which proved to be disturbed.

3.36 CA-KER-4451H (Golden Queen Mill)

Two shovel test pits (STPs) were excavated at this site. Both were sterile, indicating that there is no subsurface deposit at this site.

3.37 CA-KER-4452H (Silver Queen)

The two STPs excavated at this site were also culturally sterile, demonstrating an absence of subsurface deposition.

3.38 CA-KER-4453H (Gypsy Starlight)

No subsurface materials were discovered in the two STPs completed at this locale, indicating that it lacks a subsurface deposit.

3.39 CA-KER-4454H (Bobtail Area)

An STP was excavated at features B6 and B7, which were deemed most likely to contain subsurface remains, should any exist at this site. Both were culturally sterile. The Bobtail Area site, therefore, lacks a subsurface deposit.

4.0

ARTIFACT ASSEMBLAGE

4.1 Introduction

A total of 4769 artifacts were recovered during the Soledad Mountain Phase II project; 4363 of these from the excavations at the sites, and 406 from surface collecting. In this chapter we discuss the laboratory procedures used to process and analyze this assemblage, and then considered the recovered collection on a site by site basis.

4.2 Laboratory and Analytical Procedures

Following the completion of the Phase II fieldwork on Soledad Mountain, the recovered artifact assemblages were taken to the W & S Consultants' laboratory for washing, processing and analysis. After each specimen was washed and labeled, metrical and typological analyses were performed. We provide proveniences, measurements and weights for the various artifacts, as appropriate, in the site catalog for the project (Table 5) included in this report.

Typological analysis of the recovered assemblage emphasized the ultimate function of the artifacts, in an effort to derive a sense of the function of each sites as a whole, and their probable age, in order to provide chronological placement for each of the sites considered in this study. Initially, we categorized each artifact by major material class (metal, ceramic, glass, leather, bone), and then certain key functional classes, such as assay debris and buttons. Within certain of the material classes we also identified mode of manufacture, particularly with reference to glass, but also including nails and cans. Manufacturing technology is of particular importance in historical analyses because it often provides clues to chronological placement. For example, significant changes in the manufacturing techniques for glass bottles, metal nails and tinned cans occurred during the nineteenth century. These are key indicators of an artifact's age. Subsequently, functional identification within these classes was undertaken. Because the sites are Euro-American historical resources, functional interpretations could be partly based on a general knowledge of historical material culture use, as well as published typologies and analyses.

With regard to glass artifacts, we have employed Herskovitz's (1978) typology and identification of bottle forms and functions, along with neck forms and types. These are illustrated in Figures 69 and 70. We also note

that in the glass analysis that follows we use the color term "lavender" to refer to bottle coloration that has altered from clear due to the inclusion of manganese as a de-coloring and clarifying agent; this is sometimes referred to as "amethyst" glass. This process was followed from approximately 1880 to 1916, and thus it serves as a general temporal indicator. We use the term "purple", however, to apply to glass that was intentionally manufactured with this darker hue. For tin cans, we consulted the period official standards and measurements published by Rock (1987).

4.3 CA-KER-4446H (Cobble City)

The artifact assemblage recovered and analyzed from Cobble City totaled 1338 individual specimens, 1094 of which were recovered during the test excavations and 244 surface collected (see Table 5). We discuss this assemblage, by major analytical category, below.

4.31 Metal Artifacts

Metal artifacts from Cobble City are summarized in Table 6. A total of 793 of these were recovered on the site, representing fully 59% of the assemblage from this locality; as is clear, this was the largest major class of remains recovered at this site.

The largest category of metal artifacts is, not surprisingly, metal cans and can fragments. In fact, the can assemblage was extremely fragmentary, which is partly a reflection of the nature of the assemblage, and partly due to the recovery strategy (e.g., true dump sampling was minimal). A total of 579 can/can fragments was recovered, which is 73% of the site metal total. Unfortunately, 570 of these were too fragmentary for even the most rudimentary identification (for example, sanitary seal versus hole-in-top). The remaining nine cans were only slightly more identifiable: two are hole-in-top, thus generally pre-1920 in age, but of undeterminable size or form; the remaining seven are fragments of one gallon paint pail-type cans.

Other common metal artifacts include 73 wire nails (9%); 39 pieces of screen and mesh (5%); 31 clothing fasteners (~4%); and 12 lids and tops (1.5%); with a wide variety of miscellaneous or unique specimens. The

clothing fasteners included 19 buttons (see below), four eyelets (probably from shoes/boots); two snaps; two metal corset stays; and one each of a buckle, overall bib clip, safety pin and a garter holder. This last artifact is embossed with "Velvet Grip, Boston Garter, Pat. 12-13-92, c. 12-31-95", indicating general turn of century age. We have recovered other examples of this same garter clasp at other, turn of the century sites in southern California (e.g., W & S Consultants 1993:69), so it was apparently commonly employed in women's undergarments.

The metal jar and bottle tops and lids include four jar lids; two champagne cork holders; three bottle crown tops; one rectangular friction lid; and one salt/pepper lid. Two of the jar lids are embossed with "Genuine Boyd Cap for Mason Jars", and have a crescent moon and star in the center. Another jar lid is a cosmetic bottle embossed with "Mrs. Nellie(?) Harrison, San Francisco, Cal." around the edge, with a woman's profile over "Dermatologist" in the center. A fourth jar lid is marked with "Schilling's Best, 16 oz.", and is clearly a food lid.

Note that all of the above jars, the corset stays, garter holder, a champagne cork holder and crown bottle top were found in the same area: around Structures A1 and C1, at the northernmost end of the site, near the water tanks and pump house. Furthermore, our subjective impression is that this

area contains a relatively high quantity of liquor bottles. The relative isolation of this portion of the site and seemingly high proportion of liquor bottles, matched against the clear presence of women's remains, including "fancy" undergarments, leads us to conjecture that one or more of the structures in this area may have served as a brothel.

Although numerically relatively insignificant, there were nonetheless a noticeable number of watch parts recovered from the site: nine, or slightly more than 1% of the metal artifacts. Clearly the occupants of the site were both concerned with time keeping, and were relatively hard on time pieces, because the watch parts are all fragmentary. Six of the clock pieces appear to be portions of a single, large, bedside alarm clock; these too were recovered in the area of the putative brothel. The remaining watch fragments were from pocket watches. Two of these were from the same watch, which was engraved as follows:

MFD. BY THE ANSONIA CLOCK CO
NEW YORK, U.S. OF AMERICA
PAT. APRIL 17, 1888

Again, this is suggestive of general turn of the century temporal placement for the site, and thereby is in agreement with the historical records.

Kitchen utensils, equipment and supplies were common on the site,

although are relatively limited in the recovered assemblage, once cans are excluded. We noted a number of examples of sheet metal stoves, cast iron stove parts and stove pipes that were not collected. Collected specimens were limited to one dinner knife fragment; a decorated cast-iron stove leg; an enamel coffee pot; and a kerosene stove burner.

Electrical fixtures were also quite rare, with the majority recovered originating in the area of the Depression occupation of the northeastern quadrant of the site. For the remainder of Cobble City, electrical fixtures were localized around the pump house, at the northern end of the site, and in Structure G1, a burned wooden frame building at the southern end. Most likely, these were company buildings and were lighted, while during the primary, early twentieth century occupation of Cobble City, the remainder of the structures had no electricity.

Bullets and cartridges were also relatively rare, especially when compared to other sites of similar age in southern California. They were limited to three examples: two shotgun shells, with no markings; and a .32 cartridge marked with "WRA Co. 32 WCF"; that is, Winchester Repeating Arms Company.

Idiosyncratic or unique metal artifacts included two metal clips or hook

stays for a ledger book; a cast iron door hinge fragment; and the metal edging to an engineer's scale. In addition, a miscellaneous variety of nuts, bolts, screws, washers and other small industrial artifacts, as well as unidentifiable rusted specimens, was also recovered at the site.

4.32 Ceramic Artifacts

Ceramic artifacts from Cobble City are summarized in Table 7. They totaled 43 specimens, which represent 3% of the site assemblage. Inasmuch as most of these are derived from surface collecting, and we intentionally sampled for sherds with maker's marks or decoration and therefore the rarer ceramic artifacts, this number is probably not representative of the numerical significance of ceramics as a whole on the site. That said, it is nonetheless important to emphasize that, based on subjective impressions, ceramics are still relatively rare at Cobble City.

Although we have identified the ceramics by ware (whiteware, creamware, porcelain, earthenware) in Table 7, for analytical purposes here we have combined whiteware, creamware and ironstone, because "ironstone" was a commercial rather than technical designation that overlapped both whiteware and creamware (cf. DeBolt 1988). The breakdown of the

assemblage then is as follows:

- whiteware/creamware/ironstone - 61%;
- porcelain, dinnerware - 16.5%;
- porcelain, other (e.g., electrical fixtures) - ~5%; and
- earthenware - 6.6%.

Six of the ceramic sherds contained maker's marks, which are important determinants of artifact age; five of these marks are on whitewares, as defined above. These include the following makers:

Knowles, Taylor and Knowles - This was an East Liverpool, Ohio pottery factory that was in operation from 1870 to 1929 (Gates and Ormerod 1982; Praetzellis et al 1983; DeBolt 1988). Two "K. T. & K." marks were recovered; one dating between 1890 and 1907; and the other from 1905 to 1929.

Crown Pottery Company - This is an Evansville, Indiana, company that was in operation from 1890 to ca. 1960. One mark, consisting of a "C.P.C.", was recovered on the site. This dates to ca. 1910 (DeBolt 1988:25).

A.J. Wilkinson Ltd - One example from the Arthur J. Wilkinson ceramic factory, in Burslem, Staffordshire, England, was recovered. This

dates between 1890 and 1907 (see Praetzellis et al 1983:80).

Societe Ceramique Muistricht - An undated mark from this factory, presumably in Muistricht, Holland, was also recovered. Given that the mark includes "Made in Holland", this was clearly intended for export to English speaking countries.

Macomb - One sherd of brownware was tamped with "Macomb Stone..." and "2" in a circular cartouche. This is unidentified.

Decoration on the ceramics included examples of raised relief designs, transfer patterns, and hand-painting. Six of the whiteware sherds and four of the porcelain dinnerware had transfer patterns, generally floral in design. Hand painting was of course rare. One whiteware sherd had a hand painted glaze along the rim; three of the porcelain dinnerware sherds were hand painted, two of which were Chinese designs. Decorative treatment on the earthenware was limited to glaze. Glazing was split between two brown and two buff examples.

Finally, a glass and metal partial denture plate, consisting of two molars, was also found on the site. We include it here both because it is partly made of ceramics, and also because it truly functioned as "dinnerwear".

As should be clear, the ceramics from Cobble City are fully in keeping with an early twentieth century age for the site, both in terms of general characteristics (e.g., whiteware with crazing on the glaze), and in terms of the specifics of the maker's marks. With the exception of the Societe Ceramique Muistricht and Macomb marks, the manufacturers represented in the site assemblage are common components of historical archaeological assemblages in California, with Knowles, Taylor and Knowles particularly common, as is evident when the ceramics for the other sites on the mountain are considered (see below).

4.33 Glass Artifacts

The glass artifacts recovered from Cobble City are summarized and described in Table 9. A total of 379 glass specimens were found at the site, representing 28% of the total artifact assemblage. These are primarily broken shards of bottle glass, although one electrical insulator was also recovered.

No complete bottle specimens were found at the site. However, 69 glass artifacts were of sufficient size and/or maintained diagnostic attributes

that allowed for at least typological identification. We have used the typology and identifications of bottle and neck form published by Herskovitz (1978) for the Soledad Mountain collection; these types are illustrated in Figures 69 and 70. Note that these named types were not exclusively used for the product for which they are named; for example, champagne bottles could also serve for wine. The glass artifacts included the following types, using Herskovitz's classificatory system:

Champagne bottles (Type b bodies and necks) - 1 body, 8 necks, all dark green;

Brandy necks - (Type c necks) - 3 necks, 1 lavender and 2 clear;

Beer necks (Type d necks) - 5 necks, 3 amber and 2 light green;

Double bead necks (Type f necks) - 8 necks, 5 dark green, 2 amber and 1 lavender;

Patent/extract necks (Type f necks) - 7 necks, 5 lavender, 1 light green and 1 amber;

Wide-mouth patent/extract (Type h necks) - 3, 2 blue and 1 clear;

Oil necks (Type i necks) - 1 neck, clear;

Crown necks (Type k necks) - 6, 3 clear, 2 bright green and 1 amber;

Club sauce necks (Type l necks) - 2, both dark green;

Round ink body (Type mm body) - 1, clear.

In addition to these specimens classifiable using Herskovitz's (1978) typology, the assemblage also included more recent specimens that are not part of this historical artifact typology. These include a small amber medicine bottle and rubber topped glass dropper; a milk glass cold cream jar labeled "PONDS" on the bottom; five amber bleach jugs; and eight modern screw top necks. All of these specimens that cannot be classified using the Herskovitz' typology were recovered from the area of Depression era habitation, at the northeastern side of the site.

Identifiable attributes beyond body and neck form are also present with reference to molded marks on bottle bases. These included the following specimens:

- Light green bottle base with "PAT. AUG 22. 05";
- Amber bottle base with "SOUTHERN CAL., LOS ANGELES" around rim and "WINE CO." in center;
- Light green base with "A. B. Co" over "A6";
- Light green base with "A. B. Co." over "16";
- Amber base with "Pat.D Aug 24 1886" around rim and "2" in center;
- Clear base with "Table Products Co., Los Angeles, 118 41"; and
- Light green base with "A. B. Co." over "J4".

The two patent dates are in agreement with a turn of the century/early twentieth century age for the site. The Southern California Wine Company bottle is clearly in keeping with the dominance of viticultural bottles in the glass assemblage. The "A. B. Co" marks indicate manufacture by the American Bottle Company of Chicago, which was in operation from 1905 to 1930 (Polak 1994:421); dates which also fit within the temporal placement of the site as indicated by the historical records. And the Table Products Co., Los Angeles" mark, found in the Depression occupation area, appears to be a 1930s food bottle.

In addition to the bottles, per se, a small number of other glass artifacts were recovered at Cobble City. These included an electrical wire insulator; and a milk glass bowl with a gold rim band and a bottom mark of "FIRE KING" over "OVEN WARE" over "MADE IN USA", which was found in the Depression era occupation area. No glass identifiable as window glass was collected from the site, although a small amount was noted in the area of burnt wooden structure G1, at the southernmost end of the site. Clearly, the large majority of the structures on this site did not have glass windows.

In general, the glass assemblage is dominated by bottles that are, themselves, predominated by liquor bottles, many of which appear to have

been used for wine or champagne. Inasmuch as the 1910 census indicates that essentially all of the immigrant Italian and Slovenian miners were bachelors (or at least did not have their wives with them on the property; see W & S Consultants 1995a), and Cobble City was known as "Little Italy" by the local inhabitants because of its ethnic make-up, this apparent pattern is probably attributable to the ethnic composition of the site's residents.

4.34 Buttons

Buttons are useful artifacts because they are both indicative of the types of clothing worn by the inhabitants of a site, and because they may be time sensitive (cf. Albert and Kent 1949; Kirk 1976). Buttons found at Cobble City are summarized in Table 10. Nineteen of these were recovered, representing about 1% of the artifact assemblage from the site.

The most common class of button from Cobble City are metal (16 of the 19 total). With only one exception, the metal buttons comprise two types: overall (12) and pant fly (4). The overall buttons are primarily tubular stemmed, although one wire loop shank was also recovered. Four of the overall buttons, including the wire loop shank example, have a plain front

plate. The remainder are embossed; presumably, as was typical for overall buttons, with the clothing manufacturer's trademark or slogan (Kirk 1976:405). The most common overall maker's mark is some variant of a Carhartt's design, one example of which is illustrated by Albert and Kent (1949:391, Figure 12). According to these last authors, the Carhartt's overall buttons were produced by the Scoville Manufacturing Company in Waterbury, Connecticut. Scoville was apparently one of the largest, and the oldest, overall button manufacturer in the country, having first started producing these types of buttons as early as the 1820s (Kirk 1976:405). The Carhartt's company, however, was located in San Francisco. The remaining embossed overall buttons include one with "Head Light", and another with "Red Seal" and a star burst design.

The pant fly buttons are all iron, and are embossed with "Levi-Strauss Co.", which of course is the famous and still in business San Francisco blue jeans manufacturer.

The one variant among the metal buttons is a large brass coat button, embossed with a nautical rope and anchor design. This was recovered in the Depression era remains in the northeastern portion of the site.

Only three non-metal were found at Cobble City, two of which are made of

white "milk glass" and the third of which is mother-of-pearl. These are all shirt sized buttons.

As is clear, the button assemblage is dominated by examples from men's work clothes, as is perhaps befitting a mining camp. However, it is certainly known that women and children also occupied this camp, and so the dominance of work clothes buttons is only partly attributable to demographics. As is also clear, sewn-on non-work clothes buttons can be easily reattached if they fall off. Overall and metal pant fly buttons, on the other hand, are attached in a fashion analogous to riveting, and cannot be reattached once they have pulled through the cloth. Thus, such buttons may be more readily discarded than non-work clothes buttons, which could be reused or recycled. With this fact in mind, it then warrants noting that while the Carhartt's brand overalls may at first glance appear to be the most common brand used by the occupants of the site, it is also possible that this brand simply represents the overalls with the worst button attachments.

4.35 Leather Artifacts

Leather artifacts from Cobble City are summarized in Table 11. A total of

69 leather specimens, representing 5% by count of the site assemblage, was recovered from the site. The majority of these specimens were fragmentary and unidentifiable. The only identifiable leather artifacts are 24 shoe fragments. Judging from the locational association of these fragments within three collection units, these appear to represent portions of three separate shoes or boots. One of these is a fragment of a small shoe, probably a woman's, and the remaining two are so fragmentary as to be otherwise any further unidentifiable.

4.36 Faunal Remains

Faunal remains are particularly useful indicators of diet and subsistence, as practiced by a site's inhabitants. This being so, an effort was made to include some indication of subsistence remains from Cobble City during the test excavation; in particular, by the placement of one of the test pits in an area of Structure J1 believed to have served as a kitchen. Although this area actually proved to have relatively little in the way of discarded bone (presumably because food was prepared but not eaten or discarded at this locale), a small sample of faunal remains was nonetheless obtained from Cobble City. This is summarized in Table 12.

The faunal assemblage from the site consists of 35 specimens, representing 2.6% of the total site artifact assemblage by count, weighing 333.2 gms. The majority (~66%) of the faunal assemblage derives from large mammals, which appear to be bovid in origin. All of these also represent long bones or shafts, and at least two specimens show clear evidence of butcher's saw cuts. From the point of view of butchering and cooking, the long bones of cows are generally lacking in much meat, are usually "tough" cuts of meat and, accordingly, are not considered choice cuts. They are best suited for stews, soups and similar dishes.

The exception to the large mammal bones are 12 small mammal bones, recovered from a single provenience. These appear to be rabbit. Their presence in a shallow privy on the site is a clear indication that they were consumed (rather than having been accidentally introduced into the site through natural processes). Although rabbits were commonly raised for food at the turn of the century, the presence of these bones exclusively within a single provenience suggests that they may have been hunted by site inhabitants, and thus that subsistence practices also included a certain amount of exploitation of local resources.

In either case, the complete absence of bones from the more select cuts of beef in the faunal assemblage from Cobble City is a clear indicator that the

site inhabitants were restricted to the less expensive foodstuffs. This is certainly in keeping with the general tenor of the site features and artifacts, which reflect a general disregard (or perhaps absence of concern) for the miners on the part of the mining company.

4.37 Cobble City - Summary

The artifacts from Cobble City derive from two time periods. The majority of the temporally diagnostic artifacts are early twentieth century in age. A small quantity of Depression era remains was also recovered. These, however, were essentially restricted to the northeastern section of the site which, as noted previously, appears to have experienced intensive later use. That is, the majority of the site appears to maintain its temporal integrity. That being said, we have noted previously that no substantial dumps appear to exist on the site, regardless of time period of concern. This has limited the artifact assemblage in terms of certain key analytical artifact classes, such as subsistence remains. Nonetheless, the existing assemblage appears adequate to discern spatial variation in the material culture assemblage at the site, even if in very preliminary form.

4.4 CA-KER-4447H (Wegmen Complex)

The artifact assemblage recovered from this site totaled 2509 specimens, of which 2459 were obtained during the excavations and 50 were collected from the ground surface (see Table 5). This large artifact assemblage is discussed, by major class, below.

4.41 Metal Artifacts

A total of 1420 metal artifacts were collected at the Wegmen site; these are summarized in Table 6. As is typically the case, the large majority of these are tin can/can fragments; 1122 of these were recovered from the site, representing fully 56% of the site assemblage. For purposes of comparison, the same proportion from Cobble City was 59%, suggesting that the inhabitants of both sites had essentially equal access to packaged foods. Seventy of the cans, or about 5% of the metal artifacts, are identifiable to some degree. Seven of these are portions of rectangular tobacco tins; the remainder are hole-in-top cans, and are thus generally pre-1920 in age. Forty-one of these cans are sufficiently complete to allow accurate measurements. These fall within five size ranges, as indicated in

Table 6. Over 75% of the measurable cans are one size: 11 by 7.5 cm, or $4\frac{3}{8}$ by $2\frac{7}{8}$ inches. Unfortunately, this does not correspond to a known, standard can size or type (cf. Rock 1987), although whatever this sized can held was clearly a favorite at the site.

Other common metal artifacts on the site include wire cut nails (144 for 10% of the metal artifacts); wire mesh and screening fragments (33 or ~2%); and wire fragments (27 or ~2%).

Lids and tops were limited to seven examples. Two of these are crown tops, used for beer and soft drink bottles, and one is the metal holder for a champagne cork. Another bottle top is embossed with a partially legible logo. This is a star surrounded by circular lettering that includes "...Angeles S...", which is most likely a reference to a Los Angeles company. The last category of lids found at the site is the metal Mason or fruit jar top, of which three examples were collected.

Only two gun cartridges were recovered from the site. One cartridge is marked "EP". The other is a Winchester Repeating Arms Company .32 caliber shell marked "W.R.A. Co. 32 W.8". A similar cartridge was found at Cobble City.

Idiosyncratic, unique or rare metal artifacts included a bicycle wheel spoke, one hand-made nail, a piece of decorative cast iron (stove part?), a lock mechanism, an ornate iron door hinge fragment, a clock gear, and a thermostat cover and thermometer. This last specimen was recovered in the area of the Depression occupation, on the east side of the site, and derives from a gas heater. Finally, an iron spoon, engraved on the backside of the handle with W1 over V1, was also recovered. In addition, a miscellany of unidentifiable rusty metal pieces, screws, washers and other minor items were also found on the site.

4.42 Ceramic Artifacts

A total of 85 ceramic artifacts were recovered from the Wegmen site. these are summarized and described in Table 7. This total represents slightly more than 3% of the artifact assemblage as a whole from the site; for purposes of comparison, 3% of the Cobble City assemblage was also ceramic. Per the identifications and combinations thereof noted for the ceramic collection from this previously discussed site, the ceramic assemblage breakdown at the Wegmen site is as follows:

- Whiteware (including creamware and ironstone) - 67 (79%);

- Porcelain dinnerware - 4 (5%);
- Porcelain, other - 2 (2%); and
- Earthenware - 12 (14%).

This breakdown differs somewhat from that at Cobble City, but is within the same general pattern; the figures for the former site are 61%, 16.5%, 5% and 6.6%, respectively. In both cases the general category of whiteware greatly predominates. Perhaps surprisingly, however, earthenware is more common at the Wegmen site, and porcelain at Cobble City.

Eleven makers' marks were found on the sherds from the Wegmen site; however, only nine of these could be deciphered. Of these, the most common by far are variants of Knowles, Taylor and Knowles marks, which contributed six of the nine readable marks. These include two marks which were used after 1905; three that were used between 1890 and 1910; and one used between 1890 and 1907; all of which are in substantial agreement with an early twentieth century occupation for the site.

A second American manufacturer's mark was produced by the D.E. McNichol Pottery Company of East Liverpool, Ohio, and dates from 1892 to 1910 (Gates and Ormerod 1982:186).

Two ceramic maker's marks are foreign, in this case both English. The first was used by the J. and G. Meakin Company, of Hanley, England, between 1875 and 1883 (Praetzellis et al 1983:57). The second was employed between 1891 and 1925 by W.H. Grindley and Company, Tunstall, Staffordshire, England (ibid:41). Both of these marks are common in California historical archaeological sites, reflecting the importance of the English ceramic industry around the turn of the century. Again, their ages are in agreement with an early twentieth century age for this site, especially when the potential shelf-life of ceramic vessels is considered.

Decoration was limited to transfer patterns on the whiteware and porcelain, and glaze (typically brown) on the earthenware crockery. Twelve of the whiteware sherds had transfer patterns of some kind (typically floral), albeit four of these were sherds from the same bowl. Similarly, three of the porcelain sherds were decorated. No hand-painting was noted on any of the ceramics.

4.43 Glass Artifacts

The glass artifacts from the Wegmen site are summarized and described in Table 9. A total of 869 glass specimens were recovered from the site,

thereby constituting 35% of the site assemblage total. In contrast, glass was only 28% of the assemblage from Cobble City.

Identifiable glass artifacts, based on form, markings and other attributes, totaled 33 specimens. Using Herskovitz's (1978) typology of bottle form and neck types, nine could be classified by body form or neck. The following bottles types are present at the site:

Champagne necks (Type b necks) - 2 necks, both dark green;

Brandy necks (Type c necks) - 3 necks, 2 lavender and one dark green;

Beer necks (Type d necks) - 1 neck, light green;

Patent/extract necks (Type g necks) - 1 neck, amber;

Blake necks (Type r necks) - 1 neck, lavender; and

French mustard barrel bodies (Type ff bodies) - 1 body, lavender.

In addition to these identifiable bottle types, 17 specimens had maker's marks, allowing for some form of identification. These are as follows:

- Amber base with "9" and "2" separated by a diamond;
- Amber base with "P. D. Co." over "10" over "19";
- Small clear base with "...IOMONO..." in outer circle around "...MADE IN...";

- Amber base with "SPRUA..." around "...WH...", "SAC..." and "LIQUOR...";

- Clear rectangular body with side mark of "GORDON'S DRY GIN" over "ENGLAND";

- Lavender neck with side mark of "SHASTA WATER Co.";

- Lavender glass bottle stopper, with flat disc shaped handle with "Canad..." and "...SEPT...";

- Clear screw top bottle with printed decal (Heinz shape) of "Sweet Relish";

- Light green base with "A. B. Co.";

- Light green body fragment with a portions of "GORDON'S DRY GIN" over "ENGLAND";

- Clear octagonal bottle with "Libby's" on side;

- Clear base with "A Winarich..." over "USA";

- Amber base with "W F & S" over "T 1" over "MIL";

- Clear base with "Best Foods" over "Registered";

- Light green base with "AB" over "S[?]";

- Milk glass jar base with "Menley-James, New York, London, Made in USA";

- Clear body fragment with "...INGHA..."; and

- Clear base with reverse (interior) printed "No. 77, Pat. in U.S., Dec. 22 1803, July 17 1808, E2".

The food jars (Heinz, Best Foods, Libby's) were found in the Depression era material on the east side of the site and are either of that age, or are modern and intrusive. The "W F & S" mark was produced by William Franzen and Son, Milwaukee, Wisconsin, from 1900 to 1929 (Polak 1994:427). As noted concerning the Cobble City artifacts, the "A. B. Co" mark was manufactured by the American Bottle Company of Chicago, which was in operation from 1905 to 1930 (ibid:421). The "AB" mark is most likely from the Adolphus Busch Glass Manufacturing Company, which operated from 1904 to 1907 (ibid:421). Gordon's Gin marks are obviously from the distinctive Gordon's gin bottles, while the "SHASTA WATER Co." mark is presumably from a company of that name. The Menley-James milk glass jar is likely a cosmetics container; while the very early patent date on one bottle probably just reflects a bottle mold that itself had a long use life. The "P. D. Co." mark and other marks, partial and complete, are unidentified.

In addition to these marked specimens, seven other glass artifacts could be identified based on various other attributes. These included: another milk glass cosmetics jar, probably cold cream; a milk glass cosmetics jar lid; a medicine jar glass stopper; an amber bleach jug; a fragment of a Mason jar; an electrical wire insulator; and a milk glass bead. Finally, some window

glass and drinking vessel glass was also present with the bottle glass in this assemblage.

The glass assemblage from the Wegmen site is proportionally bigger than that from Cobble City. It also displays more diversity, both in terms of the kinds of glass artifacts present, and the variability within specific categories. Perhaps most notably, the assemblage is neither so heavily dominated by liquor bottles nor, within the liquor bottles themselves, predominated by champagne style bottles. Again, this may be reflective of different ethnic compositions of the inhabitants of the two sites.

4.44 Buttons

Only four buttons were recovered from the Wegmen site (see Table 10). These include one tubular stemmed, plain front overall button; one milk glass button; and two mother-of-pearl buttons. With the exception of the overall example, these are shirt sized.

4.45 Leather Artifacts

Leather artifacts from the site are summarized and described in Table 11. Although numerous in number, in fact these appear to represent only four artifacts: one leather glove, which disintegrated into 52 pieces within a privy, and three shoe fragments. Two of these are from small sized foot wear; perhaps women's or children's. The other is the upper legging portion of a man's boot, which appears to have been intentionally cut off at the ankle.

4.46 Faunal Remains

The faunal remains from the Wegmen site totaled 76 pieces by count, weighing 144.1 gms. This represents 3% of the total site assemblage by count, compared to 2.6% at Cobble City - again, indicating strong comparability between the two sites. As at the former site, the animal bone is dominated by large mammal long bones, probably bovid in origin. there are, however, a few exceptions at the Wegmen site, perhaps suggesting slightly greater variability in the diet. These include an immature long bone from a medium sized mammal (i.e., deer - sheep - goat size); a metapodial from an immature artiodactyl (again, deer, sheep

or goat); and a fragment of a large mammal skull. As is clear, however, the occupants of the Wegmen site were also not obtaining the better grades of meat, as also characterized Cobble City.

4.47 Wegmen site - Summary

The analysis of the artifacts at the Wegmen sites demonstrates that although the architecture differs considerably between the two sites, the basic artifact assemblages are in general quite comparable, even while they differ in certain specific details. The most notable of these concerns the glass assemblage and particularly the liquor bottle remains. As at Cobble City, the Wegmen site contains a significant amount of early twentieth century remains, although it also has a Depression era component. Furthermore, this late component is less localized at this site than at Cobble City.

4.5 CA-KER-4448H (Karma Mill)

A small artifact assemblage, consisting of only slightly more than 100 specimens, was recovered during the surface collecting and limited excavation at the Karma Mill. These are summarized in Table 5. We discuss the major classes of artifacts from the site below.

4.51 Metal Artifacts

Metal artifacts, exclusive of assay debris from the site (see below), are described in Table 6, and total 22 specimens. They include: four wire cut nails; one screw; one nut; one buckle fragment; 11 can fragments; a small brass funnel; one hand-wrought bar; one narrow gauge rail spike; and a bullet cartridge. This is marked with "U.S.C. Co. Gov.". The funnel, in fact, is most likely part of the assaying equipment, as it was collected from the upper assay office.

4.52 Ceramic Artifacts

A considerable number of ceramics artifacts associated with assaying were

recovered from the Karma Mill; these are discussed below. Other (non-assay) ceramic artifacts were limited to two specimens, both of which nonetheless were collected from the lower assay dump (see Table 7). They are both fine ware ceramics. One is a fragment of a thin walled porcelain vessel, probably a tea cup. The other is a fragment of a hand painted vessel, which appears to have been a small cut flower vase with built in frog.

4.53 Assay Debris

The largest category of remains from the Karma Mill consists of assay debris. We have summarized and described this material in Table 8. A total of 55 assay specimens were recovered from the site. These fall into three categories: dore buttons; slag; and crucibles and cupules. A total of 32 dore buttons, weighing 32.4 grams, were recovered from the upper assay office. According to Mrs. Grace Wegmen Meehl, her father, Engelbert Wegmen, used this office for assaying ore from the Randsburg Mines, where he worked, during the 1930s, so the dore buttons recovered in this room are probably from the Randsburg and not Karma mines. Some slag was also recovered from this upper office.

A small surface collection was also made at the lower assay office, which appears to date to the operation of the original Karma Mill, between 1903 and 1909. Three slag buttons and one dore button were collected from this feature, along with three cupules and three crucibles. One of the crucibles is embossed with "BATTERSEA WORKS ENGLAND" around the bottom rim, with "30" over "gms" in the middle. All crucibles/fragments at this feature had the Battersea mark; however, the vast majority of them were 20 gm sizes.

4.54 Glass

A total of 22 glass artifacts were recovered from the Karma Mill, as are summarized and described in Table 9. These include clear window glass, vessel glass and one screw top jar fragment from the upper assay house, all of which appear Depression era or later in age; and three pieces of glass laboratory tubing.

4.55 Karma Mill - Summary

The artifacts recovered from the Karma Mill are all industrial artifacts

related to the mining and milling process, or ancillary specimens resulting therefrom. They include a mix of early twentieth century and Depression era remains, reflecting the long even if sporadic use which this site experienced.

4.6 CA-KER-4449H (Queen Esther Mill)

As with the Karma Mill, artifacts from the Queen Esther Mill were largely restricted to industrial mining tools and by products. They totaled over 400 specimens, however, which are summarized in Table 5 and discussed, by major class, below.

4.61 Metal Artifacts

With the exception of buttons and assay debris, discussed below, the metal artifacts from the site include seven specimens (Table 6). These include the following:

- Cast iron door from the assay office muffle furnace, embossed with

“Pat June 16 1886”;

- Two electrical light bulb sockets;
- A lubricated star bit;
- One prospector's type metal canteen; and
- Gun cartridge marked “U. M. C. 32 S & W”.

The cartridge is a Union Metallic Cartridge Company, which became the Remington Company after World War I, indicating that this cartridge most likely dates to the early twentieth century.

4.62 Ceramic Artifacts

The ceramic artifacts from the Queen Esther Mill, described in Table 7, are limited to three fragments of a porcelain electrical insulator, and a scorifier, which rightly is part of the assay artifact assemblage.

4.63 Assay Debris

A large quantity of assay debris was recovered from the site, as

summarized and described in Table 8. This includes crucibles and crucible fragments; cupules and cupule fragments; slag; and dore. A total of 22 crucible/crucible fragments and 98 cupules were recovered. Three crucibles are embossed with "BATTERSEA WORKS ENGLAND" around "20" over "gms". There is also one crucible stamped with "Denver Fire Clay Co.". A large bar of what appears to be dore, weighing 76.2 gm, was also recovered from the cracks in the muffle furnace.

4.64 Glass Artifacts

Nineteen glass artifacts were recovered from the site, as summarized and described in Table 9. Following Herskovitz's (1978) typology, identifiable bottles from the site included:

- 1 type d amber beer neck;
- 2 type f double bead necks, one lavender and one light green;
- 1 type g lavender patent/extract neck; and
- 2 type h wide mouth patent/extract necks, one light green and one clear.

The glass assemblage also included a series of maker's marks. These are as

follows:

- "R&CO., 32" on an amber base, which was produced by Roth and Company, San Francisco, from 1879 to 1888 (Polak 1994:427);
- "I P G Co." in a diamond over "3095" on an amber base, which is the Illinois Pacific Glass Company, in operation in San Francisco from 1902 to 1932 (ibid:425);
- Two large light green bases with "W T & Co.", from Whitail-Tatum & Company, Millville, New Jersey, 1857 to 1935 (ibid:428); and
- An amber base with "A.B.Co.", which again is the American Bottle Company of Chicago, in operation from 1905 to 1930 (ibid:421).

The variety of maker's marks relative to the small number of glass specimens reflects the fact that specialized kinds of supplies, such as chemicals, were being brought into the site from various parts of the country.

4.65 Buttons

Although one might not expect a button assemblage from a mill site, the problem with buttons that the inhabitants of Cobble City seem to have had apparently followed them up the hill to their place of employment. The

nine buttons from the site are summarized and described in Table 10, and are briefly reviewed here.

Seven of the buttons are metal, and include three overall and four pant fly examples. The pant fly buttons (in fact, one is actually a rivet) are marked "Levi-Strauss Co." (with the rivet having "L.S. & Co."), paralleling the examples from the residential area. One of the overall buttons is a wire loop back. It is heart shaped and portrays a cable car under "UNION MADE". This is a variation of the Carhartt's overall button, which was made by the Scoville Manufacturing Company of Waterbury, Connecticut, and a number of which were found at Cobble City. This button type is illustrated by Albert and Kent (1949:391, Figure 12). The remaining two overall buttons are both tubular stemmed. One is embossed "Strong Hold". The other has "Cone's Boss" over a lantern motif.

The remaining two buttons on the site are mother of pearl, shirt sized specimens.

4.66 Queen Esther Mill - Summary

Like the artifacts from the Karma Mill, those from the Queen Esther are

largely industrial remains pertaining to mining and milling, or appurtenances thereof. Two facts stand out about this assemblage, however. This first is that it appears entirely early twentieth century in age, with no later materials mixed in, as is common at the three sites discussed previously. The second point is simply that some of the artifacts at the mill - particularly the overall buttons - directly link the site with the inhabitants of Cobble City.

4.7 CA-KER-4450H (Echo Mill)

The artifacts recovered from the Echo Mill numbered almost 400 in total, as summarized in Table 5. They include a moderate assemblage of metal, one piece of ceramic, a large quantity of glass, and an even more substantial collection of assay debris, as discussed below.

4.71 Metal Artifacts

The 33 metal artifacts recovered from the Echo Mill site are described in Table 6. Almost all of these are miscellaneous, unidentifiable rusted

specimens. However, they also include one wire nail; one hand wrought nail; one washer; and one cartridge, marked "U M C SH .38 LONG". This is a Union Metallic Cartridge Company rifle cartridge, which is late nineteenth century in age.

4.72 Ceramic Artifacts

Only a single ceramic artifact (exclusive of assay debris) was recovered from the Echo Mill (see Table 7). This is a creamware sherd fragment.

4.73 Assay Debris

The assay debris, mostly recovered from excavations at a disturbed assay dump, numbered 224 specimens (Table 8). These included 139 crucible fragments; 23 cupules; and 62 slag buttons/button fragments. Three of the crucibles are stamped "Denver Fire Clay Co." over "20".

4.74 Glass Artifacts

The glass artifacts from the Echo Mill are summarized and described in Table 9. They include 112 specimens. While the majority of these are miscellaneous fragments, a number are identifiable as to type or maker. The glass assemblage includes the types listed below, following Herskovitz's (1978) typology:

- Brandy (Type c) neck - 1 neck, clear bottle, with metal collar below neck embossed with "Gooderham and Worts - Limited" over "Toronto" over "Registered";

- Double bead (Type f neck) - 1 lavender neck;
- Patent/extract (Type g) neck - 1 amber neck;
- Oil (Type i) neck - 1 amber neck;
- Crown top (Type l) neck - 1 clear neck;
- Club sauce (Type l) neck - 1 light green neck; and
- Blake (Type r) body - 1 lavender body.

In addition to these bottle types, there are also a series of bottle marks on the specimens from the site. These are as follows:

- Clear bottle base with "Gooderham and Worts" over "Toronto,

Canada, Limited", which is obviously related to the brandy neck described above;

- Clear bottle base with cross-hatched design around rim and "Liquor Bottle" in center;

- Small rectangular base with side mark "Chili Powder";

- Light green base with "R&CO" over "23", which was produced by Roth and Company, San Francisco, from 1879 to 1888 (Polak 1994:427);

- Lavender base with "398"; and

- Purple glass atomizer, 2 seams, with "Fill to this line" on one side, and "The tube of this atomizer is made of one piece, pat. May 8th - 1894" on the other, with screw on lip.

In addition to the bottles, a small glass stirring rod was also recovered from the assay area.

In general, the glass assemblage supports an early twentieth century age for the site. It also appears somewhat more heterogeneous than the glass assemblages from the other sites, but this may simply be a function of sample sizes.

4.75 Echo Mill - Summary

The artifact assemblage from the Echo Mill, like those from the other two mills, is dominated by mining and milling industrial remains. It appears to be restricted entirely to the turn of the century, however, with no later materials mixed in.

5.0

SUMMARY AND CONCLUSIONS

5.1 Introduction

Phase II test excavations and determinations of significance were conducted at eight sites and portions of a ninth on Soledad Mountain, Mojave, Kern County California. These sites are CA-KER-4446H (Cobble City), CA-KER-4447H (Wegmen), CA-KER-4448H (Karma), CA-KER-4449H (Queen Esther), CA-KER-4450H (Echo), CA-KER-4451H (Golden Queen), CA-KER-4452H (Silver Queen), CA-KER-4453H (Gypsy Starlight) and CA-KER-4454H (Bobtail). The Phase II test excavations involved recording, mapping, surface collection, and limited subsurface testing, and were intended to obtain sufficient data to adequately characterize the nature and extent of each site, including age, function, size, presence or absence of subsurface deposits and integrity. We summarize our findings, and provide final recommendations for the management of each of these sites, following Appendix K of the California Environmental Quality Act (CEQA), below.

5.2 CA-KER-4446H (Cobble City)

Site CA-KER-4446H (Cobble City) is a large residential area that was constructed and initially occupied in the first decade of this century. The inhabitation of the site primarily occurred between 1903 and about 1910; however, a small degree of later occupation, dating to the Depression era and perhaps slightly later, was localized in the northeastern section of the site. The initial occupation appears to have been associated with the Queen Esther Mine and Mill. Documentary and oral history sources suggest that the site largely contained a group of male immigrant miners from Slovenia and Italy, and that it was referred to as "Little Italy" by local residents of Soledad Mountain. In terms of architecture, the site is dominated by cobble walled structures, cobble foundations for wooden cabins, and leveled tent pads. All of these features now lack architectural integrity, with many of them threatened with complete destruction due to the downslope movement of mill tailings from the Queen Esther Mill. However, the site nonetheless has the potential to contribute to our scientific understanding of a poorly documented period of Kern County history.

Development at the location of site CA-KER-4446H, therefore, will result in adverse impacts to cultural resources. Following the guidelines of CEQA,

we recommend accordingly that the mitigation of such impacts be achieved by avoidance and site preservation. If such is not feasible, we recommend that a Phase III data recovery (salvage excavation) be conducted at this site, to collect and preserve the scientific information contained therein.

5.3 CA-KER-4447H (Wegmen)

Site CA-KER-4447H (Wegmen complex) is a residential complex that was first occupied in 1903, with use and inhabitation continuing into the current decade. In particular, the inhabitation of the site can be characterized in terms of three trends: initial construction and intensive occupation from about 1903 to 1910; a second period of intensive occupation in many but not all of the structural remains during the Depression era; and a continuous occupation, from 1903 into the 1990s, in the northwestern portion of the site. Architecturally speaking, the site differs from the previous site in that it largely consists/consisted of wood cabins; that is, purchased building materials rather than locally available fieldstone cobbles. One of these wood cabins is still standing, although in a very poor state of preservation; two other cabins are in the process of collapsing. Sources indicate that the site was associated with the Karma Mill, and that many of the structures were built by the mining company

for its employees. With the exception of the standing cabin and a standing privy, the architectural features at the site lack integrity. However, the site still contains features and archaeological remains, especially on its southern and eastern sides, with scientific information useful for the reconstruction of early twentieth century mining patterns in the Mojave Desert.

Based on this last fact, development at the locale of CA-KER-4447H will result in adverse impacts to cultural resources. Following CEQA guidelines, accordingly, we recommend that these impacts be mitigated by site avoidance and preservation. Should this prove not feasible, we recommend that a Phase III Data Recovery (salvage excavation and architectural recording) be conducted as an alternative form of mitigation.

5.4 CA-KER-4448H (Karma)

Site CA-KER-4448H (Karma Mill) is a mill structure complex that was constructed in 1903, aspects of which have been used sporadically into the 1980s. The mill structure itself burned in 1947, now consisting solely of foundational remains, and therefore is completely lacking in integrity. However, the original hoist house and head frame are still standing and,

though used at various times in the past (and stripped of their original machine works), nonetheless maintain their architectural integrity, while a few archaeological features on the site (e.g., assay office dump) contain information useful for the reconstruction of early mining practices and patterns. Development at the location of this site, therefore, will result in adverse impacts to cultural resources. We recommend that these impacts be mitigated by avoidance and site preservation. If this is not feasible then, as an alternative and following the guidelines of CEQA, we recommend that a Phase III Data Recovery (architectural recording and salvage excavation) be conducted at CA-KER-4448H, to mitigate the adverse effects to this site.

5.5 CA-KER-4449H (Queen Esther)

Site CA-KER-4449H (Queen Esther Mill) was built in 1903 and used until 1910, at which point it was shut down and never re-opened or used, although much of the site appears to have been salvaged for re-use at some point in the past. It consists of a (barely) standing mill structure, a wooden building that is in the process of collapsing, and various related features. Architecturally speaking, the site lacks integrity; however, the now collapsing structures and a few archaeological features on the site

(e.g., assay dump, machine shop dump) contain scientific information useful for the reconstruction of poorly documented aspects of turn of the century mining history. Development at CA-KER-4449H, therefore, will result in adverse impacts to cultural resources. Following the guidelines of CEQA, we recommend that such impacts be mitigated by avoidance and site preservation. As an alternative, should avoidance be unfeasible, we recommend that a Phase III Data Recovery program (architectural recording and salvage excavation) be conducted at this site to mitigate any adverse impacts to it.

5.6 CA-KER-4450H (Echo)

Site CA-KER-4450H (Echo Mill) was constructed in 1903 and dismantled and apparently carted away in 1906. Extant archaeological remains at the site are currently limited to the foundational remnants of the mill, a heavily disturbed assay dump, a privy pit, and a very low density scatter of related debris. Intensive mapping and recording of the mill remnants and excavations at the dump and privy have resulted in the acquisition of scientifically consequential information from and about this site. Following Appendix K of CEQA, this has served to completely and adequately mitigate any adverse impacts to this site that might result from development. We

therefore recommend that no additional work be required at CA-KER-44450H. However, and also following CEQA guidelines, we recommend that an archaeological monitor be present if this site is graded, to record and collect any additional archaeological information that may be uncovered during such an activity.

5.7 CA-KER-4451H (Golden Queen)

Site CA-KER-4451H (Golden Queen Mill) is a large mill site that was constructed in 1935 and dismantled about 1950, and which is well documented in published historical references. The site currently consists of concrete building foundations, and concrete and wood ore chute remains and related features. These are entirely lacking in integrity, and do not contain scientific information of archaeological or historical interest. They therefore do not meet the criteria of importance as outlined in Appendix K of CEQA. Development at the locale of CA-KER-4451H, accordingly, will not result in adverse impacts to significant cultural resources. We recommend that no additional archaeological work or protection measures be conducted or required at this site.

5.8 CA-KER-4452H (Silver Queen)

Phase II studies at site CA-KER-4452H (Silver Queen Mine) determined that this locale is a small post-World War II mining complex which post-dates the operation of the Golden Queen Mine and Mill. It therefore either does not meet, or minimally meets, the age criterion for consideration as a cultural resource. In either case, it is lacking in integrity and does not contain information of archeological or historical interest. Inasmuch as CA-KER-4452H does not satisfy the criteria of importance specified by Appendix K of CEQA, development at this location will not result in adverse impacts to significant cultural resources. We recommend that no additional archaeological work or protection measures be conducted or required at this site.

5.9 CA-KER-4453H (Gypsy Starlight)

Site CA-KER-4453H (Gypsy Starlight) is a small cluster of wooden ore chutes and related mine features that date to the Depression era, and whose use was related to the operation of the Golden Queen Mine and Mill. The features at this site are either fully collapsed or in the process of collapsing, and therefore are lacking in integrity. Furthermore, this site

does not contain information of archaeological or historical importance. Based on these facts, CA-KER-4453H does not satisfy the criteria of importance as specified by Appendix K of CEQA. Development at this locale, accordingly, will not result in adverse impacts to significant cultural resources. We recommend that no additional archaeological work or protection measures be conducted or required at this locale.

5.11 CA-KER-4454H (Bobtail)

The CA-KER-4454H (Bobtail) site consists of a large area containing dispersed but unrelated mining features of different ages, such as stopes, adits and ore chutes. Four mining features from the site were located within the current study area and were evaluated during the Phase II program. These consist of an undated cobble wall, a Depression era concrete pad, a Depression era or later wooden ore chute, and a small modern head frame. These features are either lacking in integrity and/or do not contain information of archaeological or historical interest. They therefore do not meet the criteria of importance as specified in Appendix K of CEQA. Development within the area of CA-KER-4454H contained within the current study area, accordingly, will not result in adverse impacts to significant cultural resources. We recommend that no additional

archaeological work or protection measures be conducted or required within the portions of CA-KER-4454H falling within the current study area.

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7.0 TABLES

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TABLE 1: CA-KER-4446/H (Cobble City), Features and Feature Complexes

Designation	Type	Size	NSxEW	Notes
Structures/foundations/pads:				
	Dug-out w/ cobble sidewalls	11x10	ft	Assoc's w/water tanks & pump house
B1	Water tanks & pump house	11x15		2 tanks, radius = 7 ft
C1	1 room mortared cobbles	12x11		Assoc'd w/cobble edged pad
D1	1 room mortared cobbles	13x12		Assoc'd w/cobble edged pad
E1	Rock wall enclosure, 1 room	17x26		Filled w/ colluvium
F1	1 room mortared cobbles	12x13		Filled w/ colluvium
G1	Cobble foundation, burnt bldg	34x15		Remnants of burnt timber
H1	Bldg complex, mortared walls	52x48		4 rooms + 3 terraces
I1	1 room mortared cobbles	20x12		Assoc'd w/8x5 collapsed dug-out
J1	8 room complex	76x45		Complex arrangement of add-on bldgs
K1	Dug-out & pad	30x28		
L1	Terraced pad	30x36		Assoc'd w/ P3 & P4
M1	3 room + terrace complex	46x32		2 rooms = dug-outs
N1	1 room rock walls	33x30		1 small dug-out + terrace
R	1 room cobble wall enclosure	16x16		Assoc'd w/ Depression era artifacts
S	1 room cobble wall enclosure	13x38		Assoc'd w/ Depression era artifacts
S2	Terraced pad	10x26		
T	1 room mortared cobble	18.5x31		Assoc'd w/ terrace/pad
U	1 room mortared cobbles	26x36		Assoc'd w/ terrace/pad
V1	Terraced pad	30x38		
V2	Terraced pad	15x27		Oblong in shape
V3	1 room cobble wall enclosure	28x12		Privy @ N end
	1 room cobble walls	12x16		Assoc'd w/ X
X	1 room cobble walls	16x20		Assoc'd w/ terraced pad
Privies:				
C1 Privy	Privy			Assoc'd w/ C1/D1
H1 Privy	Privy			Assoc'd w/ H1 complex
J2	Privy			Assoc'd w/ J1
J3	Privy			Assoc'd w/ J1
O1	Privy			
P1	Privy			Assoc'd w/ J1
P2	Privy			
P3	Privy			Assoc'd w/ L1
P4	Privy			Assoc'd w/ L1; 1 standing wood wall
V3 Privy	Privy			Assoc'd w/ V3
V4	Privy (?)	8x8		U-shaped rock enclosure
V5	Privy (?)	6x6		U-shaped rock enclosure
Dumps/Scatters:				
A2	Scatter, misc.			Between A1, C1 & D1
F2	Can scatter			NW of X; N of F1
M2	Scatter, misc.			E of M1; extends SE to H1
V	Dump			SE of T, Depression era

TABLE 2: CA-KER-4447/H (Wegmen), Features and Feature Complexes

Designation	Type	Size NSxEW	Notes
Structures:			
	Standing cabin, board & batten	20.5x29.5 ft	3 rooms, gable front w/ porch
A2	Cobble foundation	22x43	Assoc'd privy
A3	Cobble lined depression	8x8	Dug-out (?)
B	Fallen wood cabin	22x40	Pile of broken timbers
C	Wegmen house		Occupied to 1991, remodeled Karma cabin
E	Meehl house		Occupied to 1991, modern
G	Reymert-Fraction headframe	30x50	In use into 1990s
H	1 room cabin, collapsed	12x14	Wood frame, gabled, cobble fdn
I	1 room cabin, standing	10x12	Board & batten, unframed, gabled
K	Collapsed wood cabin	15'6"x28'6"	Roof and walls caved-in on floor
L	Dug-out	8x12	Privy (modern?), 10' E of dug-out
N2	Cobble wall & pad	27x24	
N3	Pad	20x18	Assoc'd privy (?) SW corner
N4	Pad	36x32	Assoc'd privy
N5	2 room cobble wall structure	13x12	Assoc'd privy, 9 ft S
O	1 room cobble wall/fdn	15x19	Assoc'd privy, 6' W
P	1 room cobble enclosure	8x8	
X11	Terraced pad	12x15	Assoc'd w/ privy
Privies:			
A4	3 privy holes		To W and assoc'd w/ Structure A
D	Standing privy		2 room, 3 holes
	Fallen privy		Modern (?)
N4	Rock-lined privy		On pad N4
N5	Rock-lined privy		On pad N5
O	Privy		W of Structure O
X11	Privy		Assoc'd w/ pad X11
Dumps/scatters:			
F	Can scatter		Sorted, turn of century
M	Dump		Primarily Depression era, NW of K
M2	Dump		Pot-hunted, Depression era, SE of K

**TABLE 3: FEATURES AT KARMA AND QUEEN ESTHER MILLS
(CA-KER-4448H & 4449H)**

Feature #	Description	Comments
KARMA MILL & MINE		
1	Headframe, Hoist house, Haulage adit, etc	Early 20th century + later additions
2	Ore chute & jaw crusher	Modern
3	Assay office	Early 20th century
4	Stamp mill area	Foundation & stamps only; Early 20th century
5	Assay office	Sheet metal & concrete building
6	Blacksmith shop	Sheet metal building
7	Tank area	
QUEEN ESTHER MINE & MILL		
1	Mill structure	Collapsing
2	Assay lab	Wood frame filling with tailings
3	Wood structure	Collapsed
4	Wood structure	Buried by tailings
5	Tank foundation	
6	Dump & Asphalt work area	Tar barrels and piles
7	Ore haulage ramp	Depression era

TABLE 4: GOLDEN QUEEN, ECHO, GYPSY STARLIGHT, SILVER QUEEN AND BOBTAIL FEATURES

FEATURE #	DESCRIPTION	COMMENTS
Golden Queen Mill		
1	Metal Building	Modern
2	Concrete foundation	Depression era
3	Haulage level adit	
4	Concrete mill foundation	Remnants only; Depression era; burnt
5	5 Agitator vats	Depression era
6	Concrete & wood bldg	Shop structure; Depression era
7	2 Oliver drums	3rd drum ca. 200 m downslope
8	Pad & prospect	Depression era
9	Concrete structure	5x6 m, 1 room; Depression era or later
Echo Mill		
1	Metal structure	Modern
2	Haulage level adit	
3	Concrete foundation	Changing house; Depression era
4	Stamp mill foundations	Early 20th century
5	Assay office dump	Disturbed
6	Privy	Early 20th century
Gypsy Starlight		
1	Waste rock ramp	Depression era or later
2	Truck ore chute	Depression era or later
3	Truck ore chute	Depression era or later
4	Adit and open cut	Abandoned sheet metal classifier to W
5	Dump	Depression era or later
Silver Queen Mine Area		
1	Glory hole	
2	Ore chute	Depression era
3	Metal structure	Privy, modern
4	Adit & concrete foundation	Compressor room
5	Wood structure & truck chute	Collapsed; modern
Bobtail Area		
B1	Pad, cobble wall & dump	Turn-of-century
B2a	Truck ore chute	Depression era or later (Bobtail)
B2b	Truck ore chute	Depression era or later
B3a	Adit and wood trestle	Depression era or later
B3b	Wood landing/ramp	Depression era or later
B4	Concrete structure	2 room, Depression era
B5	Ore chute, ramp and adit	Starlight (?)
B6	Soledad Ext Machine Rm Fdn	Concrete foundations; post-Depression + earlier remains
B7	Cobble structure	2x4 m, no roof, no artifacts
B8	Headframe on open cut	Deadman below using cable & 55 gal drums, modern

TABLE 5: ARTIFACT CATALOG, SOLEDAD MOUNTAIN

Cat. #-	Site/Locus*	Unit/Depth	Material	#/Weight	Description
1	SC/A-2	1/0-10	Metal	5/20.9	Misc.
	(Privy)	1/10-20	Wood	*sampled	Architectural debris
3		1/20-30	Wood	*sampled	Architectural debris
4		1/30-40	Metal	4/13.6	Misc.
5			Wood	*sampled	Architectural debris
6			Glass	1/.3	Button
7		1/40-50	Metal	7/41.1	Misc.
8			Wood	*sampled	Architectural debris
9			Paper	5/0.2	Newspaper fragments
10			Plant material	3/0.4	Fruit pit
11		1/50-60	Metal	17/50.0	Misc.
12			Wood	*sampled	Architectural debris
13			Paper	19/1.8	Newspaper fragments
14		1/60-70	Wood	*sampled	Architectural debris
15			Paper	5/.3	Newspaper fragments
16	SC/A-4	2/0-10	Metal	2/1.0	Misc.
17	(Privy)		Metal	1/2.6	Button
18			Glass	14/41.7	Misc.
19			Glass	1/55.1	Bottle base fragment
20			Glass	1/64.4	Bottle neck fragment
21			Ceramic	1/4.4	Bowl fragment
22		2/10-20	Glass	27/95.8	Misc.
			Wood	5/13.7	Misc.
		2/20-30	Metal	20/38.9	Misc.
25			Glass	9/32.2	Misc.
26			Ceramic	1/7.6	Bowl fragment
27			Wood	7/2.4	Misc.
28			Cork	1/.8	Stopper fragment
29		2/30-40	Metal	72/90.2	Misc.
30			Glass	43/213.8	Misc.
31			Glass	1/8.3	Bottle fragment
32			Ceramic	1/37.2	Bowl fragment
33			Ceramic	2/294.3	Bottle fragments
34			Ceramic	2/12.8	Misc.
35			Wood	62/14.7	Misc.
36			Bone	4/2.3	Faunal remains
37			Leather	5/20.5	Glove fragments
38		2/40-50	Metal	196/400.0	Misc.
39			Glass	78/548.2	Misc.
40			Glass	1/45.8	Bottle fragment
41			Glass	1/18.7	Bottle fragment
42			Glass	1/51.5	Bottle fragment
43			Glass	1/18.1	Jar fragment
44			Glass	1/33.8	Bottle fragment
			Ceramic	1/143.5	Misc.
46			Ceramic	7/236.0	Misc.
47			Wood	47/8.1	Misc.

TABLE 5: ARTIFACT CATALOG, SOLEDAD MOUNTAIN

48			Bone	4/2.3	Faunal remains
49		2/50-60	Metal	72/248.2	Misc.
50			Glass	26/151.4	Misc.
51			Glass	1/34.7	Bottle fragment
52			Ceramic	1/7.4	Cup fragment
53			Bone	3/2.5	Faunal remains
54			Cork	2/1.7	Stopper fragments
55		2/60-70	Metal	81/159.9	Misc.
56			Glass	36/218.0	Misc.
57			Glass	7/69.0	Vessel fragment
58			Ceramic	1/6.1	Misc.
59			Wood	9/3.1	Misc.
60			Bone	4/5.9	Faunal remains
61		2/70-80	Metal	85/724.2	Misc.
62			Glass	28/110.0	Misc.
63			Glass	2/29.5	Bottle stopper
64			Glass	1/14.5	Bottle fragment
65			Wood	4/1.8	Misc.
66			Leather	25/12.4	Glove fragments
67			Cork	1/1.2	Bottle stopper
68		2/80-90	Metal	207/699.0	Misc.
69			Glass	68/342.1	Misc.
70			Glass	7/57.1	Vessel fragment
71			Glass	1/52.2	Bottle fragment
72			Glass	5/346.1	Bottle fragments
73			Ceramic	3/160.8	Misc.
74			Wood	9/4.9	Misc.
75			Leather	2/2.1	Glove fragments
76			Shell	1/.4	Button fragment
77		2/90-100	Metal	233/379.2	Misc.
78			Glass	51/414.5	Misc.
79			Glass	1/347.1	Bottle fragment
80			Glass	1/36.0	Bottle fragment
81			Glass	1/56.4	Bottle fragment
82			Glass	1/8.3	Vessel fragment
83			Glass	1/4.9	Stopper fragment
84			Glass	4/65.6	Vessel fragment
85			Ceramic	3/17.7	Misc.
86			Ceramic	1/71.7	Assay material
87			Wood	8/7.9	Misc.
88			Bone	4/16.1	Faunal remains
89			Leather	25/11.1	Glove fragments
90	SC/M	3/0-10	Metal	108/624.8	Misc.
91	(Dump)		Glass	107/1,247.1	Misc.
92			Glass	1/196.4	Bottle
93			Ceramic	10/18.9	Misc.
94			Wood	11/25.6	Misc.
95			Bone	2/24.8	Faunal remains

TABLE 5: ARTIFACT CATALOG, SOLEDAD MOUNTAIN

96			Rubber	6/19.0	Misc.
97			Plant remains	2/5.5	Fruit pits
98			Sholl	1/.8	Button
99		3/10-20	Metal	38/125.3	Misc.
100			Glass	62/344.6	Misc.
101			Ceramic	1/3.0	Misc.
102			Wood	2/7.2	Misc.
103			Plant remains	1/7.8	Fruit pit
104		3/20-30	Metal	20/13.6	Misc.
105			Glass	5/8.1	Misc.
106	SC/O	4/0-10	Metal	190/5,104	Misc.
107	(Privy)		Glass	42/475.9	Misc.
108			Ceramic	18/382.0	Misc.
110			Bone	45/73.9	Faunal remains
111		4/10-20	Metal	57/92.0	Misc.
112			Glass	36/417.7	Misc.
113			Glass	1/14.0	Bottle fragment
114			Ceramic	10/286.5	Misc.
115			Wood	3/5.4	Misc.
116			Bone	10/16.3	Faunal remains
117			Leather	1/.5	Glove fragment
118	SC/A	Surface	Glass	3/113.4	Misc.
119			Glass	1/30.4	Bottle fragment
120			Glass	1/9.8	Bottle fragment
121			Ceramic	1/127.6	Saucer fragment
122			Ceramic	1/102.9	Plate fragment
123			Leather	1/128.7	Shoe fragment
124			Leather	1/60.8	Shoe fragment
125			Leather	1/178.4	Shoe fragment
126	SC/A-2	Surface	Metal	1/71.3	Iron fragment
127			Metal	1/19.6	Spoon
128			Glass	1/23.2	Bottle fragment
129			Glass	1/223.8	Bottle fragment
130	SC/D	Surface	Glass	2/569.8	Insulators
131			Ceramic	1/1.1	Misc.
132	SC/F	Surface	Glass	1/191.3	Bottle fragment
133			Glass	1/104.9	Bottle fragment
134			Glass	1/296.8	Bottle fragment
135			Ceramic	1/237.8	Plate fragment
136			Ceramic	1/192.3	Saucer fragment
137			Ceramic	1/73.7	Cup fragment
138			Ceramic	1/240.7	Plate fragment
139			Ceramic	1/67.1	Bowl fragment
140			Ceramic	1/3.1	Fragment w/ mark
141			Ceramic	1/9.4	Fragment w/ mark
142			Ceramic	1/1.4	Fragment w/ mark
143	SC/H	Surface	Metal	1/9.8	Bullet shell
144			Ceramic	7/61.2	Misc.

TABLE 5: ARTIFACT CATALOG, SOLEDAD MOUNTAIN

145			Ceramic	1/4.8	Fragment w/ mark
146	SC/I	Surface	Metal	1/3.8	Bottle cap
147			Metal	1/89.7	Thormostat
148			Glass	4/304.3	Misc.
149			Ceramic	1/23.8	Misc.
150	SC/O	Surface	Metal	1/10.3	Clock mechanism
151			Glass	1/104.1	Bottle fragment
152			Glass	3/103.9	Misc.
153	SC/Reymert	Surface	Glass	1/115.0	Bottle fragment
154	Echo Mill	1/0-10	Metal	8/43.8	Misc.
155	(Assay dump)		Glass	12/33.3	Misc.
156			Glass	2/66.3	Bottle fragments
157			Ceramic	55/906.3	Assay debris
158			Ceramic	1/150.0	Crucible fragment
159			Slag	11/29.3	Assay debris
160		1/10-20	Metal	7/10.5	Misc.
161			Glass	20/10.4	Misc.
162			Glass	1/.5	Stirring rod fragment
163			Ceramic	52/561.8	Assay debris
164			Ceramic	1/202.8	Crucible fragment
165			Slag	34/47.9	Assay debris
166		1/20-30	Metal	5/31.8	Misc.
167			Glass	14/47.0	Misc.
168			Ceramic	49/704.7	Assay debris
169			Slag	6/7.2	Assay debris
170	Echo Mill	2/0-10	Metal	1/.7	Misc.
171	(Privy)		Glass	16/28.9	Misc.
172			Glass	1/2.6	Bottle fragment
173			Ceramic	1/1.1	Assay debris
174		2/10-20	Glass	20/37.5	Misc.
175			Ceramic	1/3.9	Misc.
176			Slag	10/11.4	Assay debris
177		2/20-30	Metal	3/16.8	Misc.
178			Metal	1/3.6	Bullet cartridge
179			Glass	5/2.5	Misc.
180			Wood	1/2.1	Misc.
181		2/30-40	Metal	6/4.1	Misc.
182			Glass	11/5.1	Misc.
183			Shell	1/.3	Button
184			Slag	1/5.5	Assay debris
185		2/40-50	Metal	2/.9	Misc.
186			Glass	10/5.2	Misc.
187			Ceramic	1/8.2	Assay debris
188	Echo Mill	Surface	Glass	1/124.1	Bottle fragment
189			Glass	1/16.7	Bottle fragment
190			Glass	1/140.1	Bottle fragment
191			Glass	1/124.9	Bottle fragment
192			Glass	2/70.2	Jar fragments

TABLE 5: ARTIFACT CATALOG, SOLEDAD MOUNTAIN

193			Glass	1/36.7	Bottle fragment
194			Glass	3/148.0	Misc.
195	Echo/Assay Of	Surface	Glass	1/67.7	Bottle
196			Glass	1/26.8	Bottle fragment
197			Glass	1/27.5	Bottle fragment
198			Glass	1/15.9	Stopper fragment
199			Glass	1/43.5	Bottle fragment
200			Ceramic	3/543.4	Assay debris
201	QER/H-1	1/0-10	Metal	57/285.8	Misc.
202	(Privy)		Glass	35/163.0	Misc.
203			Ceramic	4/10.2	Misc.
204			Wood	12/7.7	Misc.
205			Leather	4/23.4	Misc.
206		1/10-20	Metal	61/100.1	Misc.
207			Glass	12/47.5	Misc.
208			Ceramic	1/1.1	Misc.
209			Wood	4/3.8	Misc.
210			Bone	21/26.7	Faunal remains
211			Leather	19/15.5	Misc.
212		1/20-30	Metal	27/33.0	Misc.
213			Glass	8/17.4	Misc.
214			Wood	5/2.9	Misc.
215			Bone	5/5.2	Faunal remains
216			Leather	18/7.9	Misc.
217	QER/H-1	2/0-10	Metal	31/92.4	Misc.
218	(East rm floor)		Glass	2/2.1	Misc.
219			Wood	28/19.8	Misc.
220			Bone	1/2.9	Faunal remains
221			Shell	1/1.1	Button
222	QER/J-1	3/0-10	Metal	2/232.1	Misc.
223	(Privy)		Glass	9/30.9	Misc.
224		3/10-20	Metal	37/85.9	Misc.
225			Glass	100/311.9	Misc.
226			Glass	1/69.1	Bottle fragment
227			Glass	1/20.2	Molded fragment
228			Wood	10/8.2	Misc.
229			Leather	4/28.4	Shoe fragments
230			Bone	5/23.7	Faunal remains
231			Plant material	2/2.1	Fruit pits
232		3/20-30	Metal	26/22.1	Misc.
233			Glass	14/37.3	Misc.
234	QER/J-1	4/0-10	Glass	3/152.7	Misc.
235	(Kitchen floor)		Bone	1/266.0	Faunal remains
236			Plant remains	2/1.9	Fruit pits
237	QER/M-1	5/0-10	Metal	54/51.2	Misc.
238	(Privy)		Glass	6/12.9	Misc.
239			Wood	5/2.2	Misc.
240			Leather	4/1.3	Misc.

TABLE 5: ARTIFACT CATALOG, SOLEDAD MOUNTAIN

241		5/10-20	Metal	26/14.9	Misc.
242			Glass	13/33.2	Misc.
243		5/20-30	Metal	42/47.9	Misc.
244			Glass	2/1.6	Misc.
245			Leather	17/32.9	Misc.
246			Metal	3/7.4	Buttons
247		5/30-40	Metal	38/28.6	Misc.
248			Leather	3/134.7	Shoe
249	QER/V	6/surface	Metal	37/75.3	Misc.
250	(Dump)	6/0-10	Metal	221/236.2	Misc.
251			Glass	2/9.6	Misc.
252			Ceramic	1/18.2	Misc.
253			Fabric	27/3.3	Misc.
254			Shell	1/.7	Button
255		6/10-20	Metal	29/31.8	Misc.
256			Glass	6/64.2	Misc.
257	QER/V-2	7/0-10	Metal	2/35.4	Misc.
258	(Pad)		Glass	2/52.4	Misc.
259	QER/V-3	8/0-10	Metal	7/169.2	Misc.
260	(Privy)		Wood	6/6.1	Misc.
261			Bone	3/4.8	Faunal remains
262		8/10-20	Metal	4/8.7	Misc.
263		8/20-30	Metal	3/5.4	Misc.
264			Bone	2/8.7	Faunal remains
265	QE/Assay D.	1/Surface	Ceramic	93/2000.8	Assay debris
266			Slag	3/7.6	Assay debris
267		1/0-10	Ceramic	239/2958.9	Assay debris
268		1/10-20	Ceramic	52/977.8	Assay debris
269		Surface	Ceramic	1/68.6	Crucible frag.
270			Slag	1/47.2	Slag button
271			Slag	1/30.9	Slag button
272			Dore	1/76.2	Dore debris
273	QER/C-1	Surface	Metal	34/334.3	Misc.
274			Glass	23/897.6	Misc.
275			Ceramic	16/157.8	Misc.
276	QER/G-1	Surface	Ceramic	1/63.1	Electrical insulator
277-S.A. #1	QER/H-1	Surface	Metal	3/6.1	Misc.
278-S.A. #2			Metal	1/885.7	Stove fragment
279-S.A. #3			Metal	1/359.8	Coffee pot
280-S.A. #3			Glass	3/319.0	Misc.
281	QER/I-1	Surface	Glass	1/33.7	Bottle fragment
282-S.A. #1	QER/J-1	Surface	Metal	5/31.3	Misc.
283-S.A. #2			Glass	3/150.9	Misc.
284-S.A. #3			Metal	3/180.3	Misc.
285-S.A. #4			Metal	3/56.1	Misc.
286-S.A. #4			Glass	1/165.6	Bottle base
287	QER/K-1	Surface	Metal	2/134.0	Misc.
288			Glass	1/ 324.7	Misc.

TABLE 5: ARTIFACT CATALOG, SOLEDAD MOUNTAIN

289	QER/L-1	Surface	Metal	6/17.0	Buttons
290-S.A. #1	QER/M-1	Surface	Metal	1/164.7	Stove burner
291-S.A. #1			Glass	1/133.2	Glass insulator
292-S.A.#2			Metal	1/2.7	Snap
293-S.A.#2			Glass	1/.5	Misc.
294	QER/N-1	Surface	Glass	14/872.2	Misc. bottle fragments
295			Glass and shell	2/1.7	Buttons
296	QER/O-1	Surface	Glass	2/160.1	Misc.
297	QER/S-2	Surface	Metal	7/65.3	Misc.
298			Glass	14/648.1	Misc.
299	QER/T	Surface	Metal	6/270.2	Misc.
300			Glass	2/119.5	Misc.
301			Ceramic	2/23.6	Misc.
302	QER/U	Surface	Metal	1/4.1	Button
303	QER/V	Surface	Glass	9/599.8	Misc.
304			Ceramic	8/508.4	Misc.
305			Ceramic	1/138.3	Crucible fragment
306	QER/V-1	Surface	Metal	8/78.0	Misc.
307			Glass	6/196.2	Misc.
308			Ceramic	5/28.4	Misc.
309	QER/V-2	Surface	Glass	1/74.7	Jar fragment
310			Ceramic	2/615.2	Plate fragments
311	QER/V-3	Surface	Glass	1/120.6	Bottle fragment
312			Glass	1/1.6	Bottle fragment
313	QER/W	Surface	Metal	4/188.4	Misc.
314	QE/Assay Of.	Surface	Metal	1/307.3	Furnace plate
315	QE/Mill	Surface	Metal	11/723.5	Misc.
316			Glass	19/1830.8	Misc.
317			Ceramic	4/131.0	Misc.
318			Slag	1/31.7	Assay button
319			Shell	2/1.1	Buttons
320	Karma/Assay1	1/0-10	Metal	18/118.6	Misc.
321			Glass	19/108.5	Misc.
322			Ceramic	1/1.4	Misc.
323			Wood	12/11.8	Misc.
324			Slag	13/18.1	Assay debris
325		Workbench	Dore	32/32.4	Assay debris
326			Metal	1/1.2	Funnel
327	Karma/Assay2	Surface	Slag and Dore	2/74.2	Assay buttons
328		Dump-surface	Ceramic	6/669.4	Assay debris
329			Ceramic	1/64.8	Porcelain frag.
330			Slag	2/50.7	Assay buttons
331	Karma/Mill	Surface	Metal	3/590.2	Misc.
332			Glass	3/15.7	Misc.
333	SC/A-4	Surface	Glass	1/1.0	Bead
334	Independant	Surface	Metal	1/174.9	Drill bit
335	QE Mill	Surface	Metal	1/222.3	Drill bit

TABLE 5: ARTIFACT CATALOG, SOLEDAD MOUNTAIN

	*KEY:					
		SC - CA-KER-4447H (Wegmen)				
		QER - CA-KER-4446H (Cobble City)				
		QE - CA-KER-4449H (Queen Esther Mill)				
		Karma/Assay1 = Upper Assay Building				
		Karma Assay2 = Lower Assay Dump				

TABLE 6: METAL ARTIFACTS

Catalog # (Site/Feature)	#/wt (gms)	Description
C/Wegman		
SC/A-2 (Unit 1)		
1	5/20.9	Wire cut nails.
4	4/13.6	Wire cut nails.
7	7/41.7	Wire cut nails.
10	17/50.0	Wire cut nails.
SC/A-4 (Unit 2)		
16	2/1.0	Misc. non-i.d.
24	20/38.9	4 wire cut nails, 1 bicycle spoke, 16 can fragments.
29	72/90.2	5 wire cut nails, 5 wire fragments, 2 pieces foil, 2 metal bands, ? i.d., 54 can fragments, 4 non-i.d.
38	196/400.0	2 wire cut nails, 1 eyelet, 1 champagne bottle wire cork cover, 185 can fragments, 7 non-i.d.
49	72/248.2	2 wire nails, 1 hand-hewn nail, 2 wire fragments, 67 can fragments, 1 non-i.d.
55	81/159.9	6 wire cut nails, 3 wire fragments, 68 can fragments, 3 non-i.d.
61	85/729.2	2 large wire cut nails, 1 large metal band, 1 metal fruit jar type lid, 78 can fragments
68	207/699.0	5 wire cut nails, 5 wire fragments, 2 eyelets, 1 bullet cartridge marked with an "E P" on the base, 1 piece foil, 190 can fragments, 3 non-i.d.
77	233/379.2	4 wire cut nails, 4 wire fragments, 220 can fragments, 5 non-i.d.
C/M (Unit 3)		
90	108/624.8	21 wire cut nails, 3 pieces wire, 7 rectangular tobacco tin fragments, 2 key type can openers, 2 washers, 1 small metal ring, 1 piece decorative cast-iron decorative, 2 jar lids, 1 piece of a lock mechanism, 2 hole-in-top milk cans (6.0x6.5x6.5), 1 ? i.d. hole-in-top can (10.8x7.8x7.5), 3 pieces foil, 1 non-i.d. metal band
99	38/25.3	2 wire cut nails, 1 eyelet, 1 flat handle, 1 screw, 33 can fragments
104	20/13.6	19 can fragments, 1 fence staple
106	190/5104.0	18 wire cut nails, 1 large nut, 1 rivet, 2 crimped bottle caps, 25 pieces wire mesh screen, 5 pieces wire, 63 hole-in-top cans: 31- 11.0x7.5x7.5, 5- 11.5x10.0x10.0, 2- 10.0x8.0x1.0, 25- ? dimensions, 75 non-i.d. can fragments
111	57/92.0	7 wire cut nails, 8 pieces screen, 42 can fragments
SC/A-2 (Surface)		
126	1/71.3	Ornate, cast-iron door hinge fragment
127	1/19.6	Spoon, mark on back of handle- "WI" over "VI"
SC/H (Surface)		
143	1/9.8	Bullet cartridge with mark on base- "W.R.A.Co., 32 W.8."
SC/I (Surface)		
146	1/3.8	Bottle top with mark- a star surrounded by lettering, largely illegible, "....Angeles S...."
147	1/89.7	Thermostat cover with thermometer
C/O (Surface)		
150	1/10.3	Small cogged wheel- clock mechanism

TABLE 6: METAL ARTIFACTS

Echo Mill (Unit 1)		
154	8/43.8	1 hand-hewn nail, 1 washer, 6 misc. non-i.d. fragments
160	7/10.5	Misc. non-i.d.
166	5/31.8	Misc. non-i.d.
170	1/.7	Misc. non-i.d.
177	3/16.8	1 wire cut nail, 2 non-i.d.
178	1/3.6	Bullet cartridge with mark- "U.M.C. S H .38 LONG."
181	6/4.1	Misc. non-i.d.
185	2/.9	Misc. non-i.d.
QER/Cobble City		
QER/H-1 (Unit 1)		
201	57/285.8	18 wire cut nails, 37 can fragments, 2 shotgun shell cartridges
206	61/100.1	16 wire cut nails, 5 screw fragments, 1 piece wire, 3 eyelets, 38 can fragments
212	27/33.0	5 wire cut nails, 2 pieces window screen, 20 can fragments
QER/H-1 (Unit 2)		
217	31/92.4	25 wire cut nails, 9 can fragments
QER/J-1 (Unit 3)		
222	2/232.1	2 hole-in-top cans
224	37/85.9	2 wire cut nails, 2 wire fragments, 1 button, 31 can fragments, 1 non-i.d.
232	26/22.1	3 pieces screen, 23 can fragments
QER/M-1 (Unit 5)		
237	54/51.2	2 pieces screen, 1 eyelet, 52 can fragments
241	26/14.9	26 can fragments
243	42/47.9	42 can fragments
246	3/7.4	Buttons
247	38/28.6	38 can fragments
QER/V (Unit 6)		
249	37/75.3	Can fragments
250	221/236.2	32 pieces screen, 187 can fragments
255	29/31.8	Can fragments
QER/V-2 (Unit 7)		
257	2/35.4	2 large wire cut nails
QER/V-3 (Unit 8)		
259	7/169.2	7 fragments of a large "paint-type" can
262	4/8.7	3 wire cut nails, 1 can fragment
263	3/5.4	1 hand-hewn nail, 1 snap fragment, 1 buckle fragment
QER/C-1 (Surface)		
273	34/334.3	6 pieces of clockwork mechanism, 2 wire cut nails pushed through metal discs - roofing nails, 1 garter-holder ("Velvet Grip, Boston Garter, Pat. 12-13-92, c. 12-31-95"), 1 button, 2 jar lids ("Genuine Boyd Cap for Mason Jars" with a crescent moon and star in the center), 1 cosmetic jar lid with mark- "Mrs. Nellie(?) Harrison, San Francisco, Cal." around edge with a woman's profile in the center over "Dermatologist", 1 jar lid with mark- "Schilling's Best, 16 oz.", 1 champagne cork holder, 1 crimped bottle cap, 1 cast-iron hinge fragment, 1 electrical object (? i.d.), 2 corset stays, 1 kitchen knife, 2 ledger hook stays, 6 non-i.d.

TABLE 6: METAL ARTIFACTS

QER/H-1 (Surface)		
277	3/6.1	2 buttons, 1 cover-all bib clip
278	1/885.7	Ornate cast iron stove leg
279	1/359.8	Coffee pot
QER/J-1 (Surface)		
282	5/31.3	1 screw-on bottle top, 1 pocket watch cover, 3 buttons
284	3/180.3	1 ? i.d. ornate cast-iron fragment, 1 pulley, 1 conveyor belt clip
285	3/56.1	3 conveyor belt clips
QER/K-1 (Surface)		
287	2/134.0	2 chest latches
QER/L-1 (Surface)		
289	6/17.0	Buttons
QER/M-1 (Surface)		
290	1/164.7	Stove burner, kerosene
292	1/2.7	Clothing snap
QER/S-2 (Surface)		
297	7/65.3	2 pocket watch parts, 1 with inscribed markings- "Mfg. by the Ansonia Clock Co., New York, U.S. of America, Pat. April 17, 1888", 2 fragments of an engineering scale, 2 washers, 1 bullet cartridge with mark-"W.R.A. Co. 32 W.C.F."
QER/T (Surface)		
299	6/270.2	1 electrical lamp socket, 2 auto spark plugs (metal and porcelain), 1 faucet key, 1 large fence staple, 2 buttons
QER/U (Surface)		
302	1/4.1	Button
QER/V-1 (Surface)		
306	8/98.0	3 crimped bottle caps, 1 champagne cork holder, 1 rectangular cap, 1 salt and pepper top, 1 bent thick wire handle, 1 coiled wire spring
QER/W (Surface)		
313	4/188.9	2 washers, 1 safety pin, 1 cast-iron ? i.d. object
QE/Assay Office (Surface)		
314	1/307.7	Muffel furnace cast-iron plate with mark, "Pat June 16 1886"
QE/Mill (Surface)		
315	11/723.5	7 buttons, 2 electrical light-bulb sockets, 1 canteen, 1 bullet cartridge with mark "U.M.C. 32 S&W"
Karma/Assay1 (Unit 1)		
320	18/118.6	4 wire cut nails, 1 large screw, 1 large nut, 1 buckle fragment, 11 can fragments
326	1/1.2	Small funnel
Karma/Mill (Surface)		
331	3/590.2	1 large hand-hewn metal bar, a large hand-hewn nail, 1 bullet cartridge with mark- "U.S.C. Co. Gov."
Independant (Surface)		
334	1/174.9	Lubricated chisel type drill bit
QE/Mill (Surface)		
335	1/222.3	Lubricated star type drill bit

TABLE 7: CERAMIC ARTIFACTS

Catalog # (Site/Feature)	#/wt (gms)	Description
SC/Wegmen		
SC/A-4		
21	1/4.4	Creamware bowl fragment with a scalloped edge.
26	1/7.6	Creamware bowl fragment, base.
32	1/37.2	Creamware bowl fragment with portion of mark- "...N", over an arrow.
33	2/294.3	Fragments of an earthenware crock with a handle at the neck, like that commonly used for whiskey; dark brown glaze with an unglazed ring around the shoulder.
34	2/12.8	Creamware fragments.
45	7/236.0	5 pieces of creamware fragments; 2 pieces of earthenware crock, probably associated with cat. #33.
46	1/143.5	Ironstone fragment with mark- "K.T.&K." (Knowles, Taylor, Knowles) - Mark used after 1905 (DeBolt 1988).
52	1/7.4	Whiteware cup fragment with a gold transfer print pattern along the interior rim.
58	1/6.1	Creamware fragment
73	3/160.8	1 whiteware cup fragment; 2 earthenware fragments with brown glaze (probably part of #33).
85	3/17.7	1 whiteware cup fragment, 1 creamware cup fragment, 1 crock fragment.
SC/M		
93	10/18.9	7 pieces whiteware, 3 with floral transfer print, 1 with a green glaze; 2 pieces of porcelain cups, 1 with a red transfer print, 1 with an iridescent blue band; 1 piece of a porcelain insulator.
SC/O		
101	1/3.0	Creamware fragment
108	18/382.0	15 ironstone fragments; 3 brown-glazed earthenware crock fragments.
114	10/286.5	6 pieces, thick-walled ironstone, 1 yellow glazed creamware, 1 white porcelain fragment, 2 fragments of brown glazed earthenware.
SC/O		
121	1/127.6	Ironstone saucer fragment with mark- "K.T.&K." under "Semi-vitreous", dates to post 1905 (Praetzelis et. al. 1983).
122	1/102.9	Ironstone plate fragment with a mark- "K.T.&K." over "s-v" over "China", dates to 1890-1910 (Praetzelis et. al. 1983)
SC/D		
131	1/1.1	Porcelain fragment with a blue transfer print design.
SC/F		
135	1/237.8	Ironstone plate fragment with a mark- "K.T.&K." over "China", dates to 1890-1910 (Gates and Ormerod 1982:125).
136	1/192.3	Ironstone saucer fragment with a stamped mark- illegible.
137	4/73.7	4 whiteware cup fragments with red transfer print pattern covering the exterior.
138	1/240.7	Ironstone plate fragment with scalloped rim and mark- "Ironstone China" over a rampant lion and horse, over "J.&G. Meakin, Hanley, England", dates to 1875-1883 (Praetzelis et. al. 1983:57).
139	1/67.1	Ironstone bowl fragment with mark- "Semi-Vitreous" over "K.T.&K.", dates to 1890-1910 (Praetzelis et. al. 1983).

TABLE 7: CERAMIC ARTIFACTS

140	1/3.1	Ironstone plate fragment with mark- rampant lion and horse under "Ironstone", dates to 1891-1925. W.H. Grindley & Co., England. (Praetzelis et. al. 1983:41)
141	1/9.4	Ironstone plate fragment with mark- "Warranted" over a crest with a pediment over a shield; from the D.E. McNichol Pottery Co., dating to 1892-1910 (Gates and Ormerod 1982:186).
142	1/1.4	Small ironstone fragment with portion of mark- similar to mark used by Knowles, Taylor and Knowles from 1890-1907 (Gates and Ormerod 1982:119).
SC/H		
144	7/61.2	4 pieces of shallow creamware bowl with a transfer print pattern on the interior in black of leaves and flowers; 1 piece of whiteware with a raised pattern along the rim (plate fragment); 1 piece of a creamware bowl (large size) with raised pattern on exterior and cream and green glaze; electrical insulator fragment of white porcelain.
145	1/4.8	Small fragment of whiteware with a portion of a mark- "HOP" over "Semi-porcelain" over a portion of a design which includes the top of a crown
SC/I		
149	1/23.8	Ironstone bowl fragment, white with a green patterned glaze on the exterior and a scalloped rim.
Echo Mill		
175	1/3.9	Creamware fragment
QE/Cobble City		
E/H-1		
3	4/10.2	4 pieces creamware- green, white and blue striped pattern on exterior, white interior (painted glaze)
208	1/1.1	Piece of glazed creamware with pattern similar to #203.
252	1/18.2	Ironstone plate fragment, no mark.
QER/C-1		
275	16/157.8	5 pieces of whiteware with a floral transfer print; 6 pieces porcelain, 2 w/ a dark-green transfer print, 1 with a handpainted orange stripe, also 1 tiny "doll-sized" plate fragment; 6 pieces creamware and ironstone, 3 with marks- 1 "Societe Ceramique Muistrich" surrounding a rampant lion over "Made in Holland", 1 "K.T.&K." mark dating to 1890-1907 (Praetzelis, et. al. 1983:47), 1 with an "A.J. Wilkenson" mark, dating to 1885-1896 (Praetzelis et. al. 1983:80); 2 pieces brown glazed earthenware.
QER/G-1		
276	1/63.1	Porcelain electrical insulator fragment.
QER/T		
301	2/23.6	1 porcelain spark plug fragment, 1 porcelain electrical insulator fragment.
QER/V		
304	8/508.4	5 pieces ironstone, 1 with ornate, multicolored transfer print around the rim with the fragment of a stamped mark- a crown over "C.P.C.", from the Crown Pottery Co., Evansville, Indiana, dating to ca. 1910 (DeBolt 1988:25), this crown pattern was limited to dinnerware, 1 with "K.T.&K." over three lines (one with "s-v") over "China" dating to 1905-1929 (Praetzelis et. al. 1983:49); 1 piece porcelain with a floral transfer print; 2 pcs earthenware with buff glaze, 1 stamped with a mark- "Macomb Stone..." in a circle with

TABLE 7: CERAMIC ARTIFACTS

		part of a "2".			
QER/V-1					
308	5/28.4	2 pieces whiteware, both with raised pattern of dots along the external rim;			
		3 pieces porcelain, 2 hand-painted with a "Chinese" house pattern in multi-			
		colors, 1 with a floral transfer print.			
QER/V-2					
310	2/615.2	2 fragments of a creamware plate with a blue glaze.			
312	1/1.6	Dental partial plate.			
QE/Mill					
317	4/131.0	3 pieces of a porcelain electrical insulator; 1 fragment of a scorifier.			
Karma/Assay1					
322	1/1.4	Piece of thin-walled porcelain.			
Karma/Assay2					
329	1/64.8	Fragment of an unknown object, a cup-like form with small perforations			
		through a middle plate; hand-painted in a floral pattern with gold high-			
		lights.			

TABLE 8: ASSAY DEBRIS

Catalog #	#/wt (gms)	Description
Echo Mill - Assay Dump Excavation & surface Collection		
57	55/906.3	47 crucible fragments, 8 cupule fragments
159	11/29.3	Slag button fragments.
163	52/561.8	44 crucible fragments, 8 cupule fragments
164	1/202.8	Crucible fragment with stamped mark on bottom- "Denver Clay Co", over "20"
165	34/47.9	Slag button fragments.
168	49/704.7	42 crucible fragments, 7 cupule fragments
169	6/6.7	Slag button fragments.
173	1/1.1	Crucible fragment
176	10/11.4	Slag button fragments.
184	1/5.5	Slag button fragments.
187	1/8.2	Crucible fragment
200	3/543.4	Crucibles, 2 with stamped marks on the bottom- "Denver Fire Clay", "20".
Queen Esther Mill/Assay Excavation		
265	93/2,000.8	11crucible fragments, 3 with embossed marks-"BATTERSEA WORKS", "ENGLAND", "20 Grams"; 1 with a stamped mark- "Denver Fire Clay Co", over "30".
266	3/7.6	Slag button fragments.
267	239/2,958.9	7 crucible fragments, 49 cupules and fragments.
268	52/977.8	3 crucible fragments, 49 cupules and fragments.
269	1/68.6	Crucible with slag button in place.
270	1/47.2	Complete slag button.
271	1/30.9	Complete slag button.
272	1/76.2	Dore' "bar" composed of accumulated run-off from beneath floor boards.
Queen Esther Mill - Assay Office Area		
317	1/210.2	Scorifier fragment.
318	1/31.7	Complete slag button.
Cobble City - QER/V		
305	1/138.3	Crucible fragment with embossed mark- "BATTERSEA WORKS", "ENGLAND", "20 Grams".
Karma Mill - Upper Karma Assay Office (Unit 1)		
324	13/18.1	Slag button fragments.
325	32/32.4	Dore' buttons.
Karma Mill Lower Assay Surface Scatter		
327	2/74.2	Slag and Dore' button fragments.
328	6/669.4	3 crucibles, 1 with embossed mark- "BATTERSEA WORKS", "ENGLAND", "30 Grams", and 3 cupules.
330	2/50.7	2 complete slag buttons.

TABLE 9: GLASS ARTIFACTS

Catalog # (Site/Feature)	#/wt (gms)	Description
C/Wegman		
SC/A-4		
18	14/41.7	Misc. fragments- 6 clear, 2 amber, 1 blue, 5 lavender.
19	1/55.1	Amber bottle-base fragment w/ portion of a mark- a "9" and a "2" with an oval enclosing a diamond in between.
20	1/64.4	Dark green bottle neck fragment, type b (Champagne).
22	27/95.8	Misc. fragments-10 clear, 7 dark green, 1 blue, 9 lavender.
25	9/32.2	Misc. fragments- 3 clear, 3 dark green, 1 milk, 3 lavender.
30	43/143.2	Misc. fragments- 19 clear, 2 dark green, 10 amber, 2 blue, 1 milk, 9 lavender.
31	1/8.3	Pale lavender molded bottle shoulder fragment; vessel appears to have been rectangular with fluting on the short sides.
39	78/548.2	Misc. fragments- 26 clear, 11 dark green, 15 amber, 14 light green, 1 blue, 13 lavender.
40	1/45.8	Lavender French barrel mustard bottle (type ff) fragment (Wilson 1981:110).
41	1/18.7	Amber bottle base with mark- "P.D.&Co." over "10" over "19".
42	1/51.5	Pale lavender bottle neck fragment, "Blake" style (type r).
43	1/18.1	Milk glass cosmetic jar.
44	1/33.8	Amber beer bottle shoulder fragment.
50	26/151.4	Misc. fragments- 8 clear, 7 dark green, 3 amber, 5 light green, 1 milk, 2 lavender.
51	1/34.7	Lavender bottle neck- type c (Brandy).
56	36/218.0	Misc. fragments- 15 clear (including 1 piece window glass), 9 dark green, 2 amber, 5 light green, 4 blue, 4 lavender.
57	7/69.0	Clear, molded glass fragments, very thick and flat with a cut-glass pattern of starbursts; unknown vessel shape or type.
62	28/110.0	Misc. fragments- 16 clear, 2 dark green, 7 amber, 1 light green, 1 blue, 1 lavender.
63	2/29.5	Clear bottle stopper, medicine bottle type.
64	1/14.5	Small clear glass rectangular bottle fragment with portion of a mark molded onto the base- ".....IAMONO.....", on the outer portion of a circle, over "....MADE IN...."; also in a circle.
69	69/342.1	Misc. fragments- 6 clear (1 window), 9 dark green, 17 amber, 23 light green, 1 blue, 13 lavender.
70	7/57.1	Clear, molded glass, probably part of #57.
71	1/52.2	Amber bottle base fragment with portion of a molded mark- "SPRUA...." around "WH....", "SAC....", and "LIQUOR....".
72	5/346.1	Clear rectangular bottle fragments with molded lettering on the side- "Gordon's Dry Gin", "England".
78	51/414.5	Misc. fragments- 9 clear, 8 amber, 5 dark green, 12 light green, 7 lavender.
79	1/347.1	Lavender, thick walled bottle neck fragment with molded lettering around the sides at the base- "Shasta Water Co."; molded- 2 seams.
80	1/36.0	Lavender bottle base.
81	1/56.4	Lavender bottle neck, type c (Brandy).
82	1/8.3	Clear thin-walled drinking vessel with incised rim.
83	1/4.9	Lavender glass bottle-stopper fragment; molded lettering on top of flat disc-shaped handle- "Canad....", and "...SEPT....".

TABLE 9: GLASS ARTIFACTS

84	4/65.6	Thick, molded clear glass fragments, probably associated with vessel #57.
91	107/1,247.1	Misc. fragments- 47 clear (including 22 pieces from screw top vessels), 7 dark green, 29 amber, 9 light green, 6 blue, 2 milk, 5 lavender, 2 clear with blue paint on the exterior, 1 with small blue stars.
SC/M		
92	1/196.4	Clear, molded glass screw-top bottle with printed lettering on the side (decals)- "Sweet Relish"; rough outline of label is similar to that used by the Heinz Co.
100	62/344.6	Misc. fragments- 42 clear (including one Ball jar fragment), 2 dark green, 5 amber, 5 light green, 5 blue, 1 milk with red painted lettering (illegible).
105	5/8.1	Misc. fragments- 5 clear.
SC/O		
107	42/475.9	Misc. fragments-15 clear, 6 dark green, 14 amber, 6 light green, 14 lavender.
112	36/417.7	Misc. fragments- 11 clear, 5 dark green, 12 amber, 3 light green, 5 lavender.
113	1/14.0	Amber bottle neck, type g (Patent/extract); molded, with seam running up neck and onto side of lip.
SC/A		
118	3/113.4	Misc. fragments- 2 lavender, 1 milk- fragment of a flat lid of a cosmetic jar.
119	1/30.4	Light green bottle neck, type d (Beer).
120	1/9.8	Dark green bottle neck, type c (Brandy).
SC/A-2		
128	1/23.2	Light green base fragment with portion of a molded mark- "A.B.Co."
129	1/223.8	Light green fragment of a square shaped bottle with a portion of a molded mark- "GORDON'S DRY GIN, ENGLAND".
SC/D		
130	2/569.8	2 light green electrical insulator fragments, one with a molded mark- "Hemingway".
SC/F		
132	1/191.3	Clear, octagonal bottle base with molded mark- "Libby's" on side.
133	1/104.9	Clear, rectangular bottle base with molded mark on bottom- "A Winarich...", and "USA".
134	1/296.8	Amber beer bottle type neck; molded with 2 seams and mark on bottom- "W F & S", "T 1", "MIL".
SC/I		
148	4/303.3	Misc. fragments with marks- 1 clear jar/bottle base with "Best Foods", above "Registered"; 1 light green bottle base with "AB" and "S?"; also 1 amber jug type bottle with handle at neck and screw on top; milk glass jar base with molded mark- "Menley-James, New York, London, Made in USA".
SC/O		
151	1/104.1	Clear bottle base with molded mark on base, printed in reverse- "No. 77, Pat. in U.S., Dec. 22 1803, July 17 1808, E2"
152	3/103.9	Purple bottle base, bottle would have been ovoid in profile; light blue jar rim, screw top; small fragment of clear glass with "...INGHA...", molded onto side of vessel.
SC/Reymert		
153	1/115.0	Dark green bottle neck fragment type b (Champagne).

TABLE 9: GLASS ARTIFACTS

Echo Mill		
155	12/33.3	Misc. fragments- 6 clear (4 thin-walled vessel, 2 window), 5 dark green, 1 lavender.
156	2/66.3	Fragments of a lavender rectangular Blake (type r) bottle.
161	20/10.4	Misc. fragments- 20 clear (12 thin-walled vessel, 8 window).
162	1/.5	Fragment of a clear glass chemical stirring rod.
167	14/47.0	Misc. fragments- 7 clear (3 vessel fragments, 4 window), 3 dark green, 4 lavender.
171	16/28.9	Misc. fragments- 10 clear, 6 amber.
172	1/2.6	Clear bottle neck with Crown type top.
174	20/37.5	Misc. fragments- 6 clear, 6 amber, 8 lavender.
179	5/2.5	Misc. fragments- clear.
182	11/5.1	Misc. fragments- 9 clear, 2 amber.
188	1/124.1	Clear bottle neck, type c (Brandy), with a metal collar around the neck below the lip; with raised markings- "Gooderham and Worts - Limited", over "Toronto", "Registered".
189	1/116.7	Large, thick-walled amber bottle neck with type i (Oil) top.
190	1/140.1	Clear bottle base, molded (2 seams), with molded mark "Gooderham & Worts", "Toronto Canada, Limited".
191	1/124.9	Clear bottle base with cross-hatched pattern around rim, "Liquor Bottle" mark in center.
192	2/70.2	Bright green jar/bottle fragments, one is from a vessel lid with a knob-type top, both are molded.
193	1/36.7	Small, rectangular bottle base with molded lettering on side- "Chili Powder".
194	3/148.0	Light green bottle fragments- 1 neck, type l (Club sauce); 1 base fragment, 1 base fragment with "R&CO" over "23".
Echo Assay		
195	1/67.7	Purple glass spherical atomizer; molded (2 seams), with lettering- "Fill to this line", on one side, and on the other- "The tube of this atomizer is made of one piece, pat. May 8th - 1894"; screw on type lip.
196	1/26.8	Amber bottle neck, type g (Patent/extract).
197	1/27.5	Lavender bottle neck, type f (Double bead).
198	1/15.9	Clear, molded medicine-type bottle stopper handle top, flat, round shape.
199	1/43.5	Lavender bottle base with molded "398" on bottom.
QER/Cobble City		
QER/H-1		
202	35/285.8	Misc. fragments- 6 clear, 19 dark green, 1 amber, 1 light green, 8 lavender.
207	12/47.5	Misc. fragments- 3 clear, 5 dark green, 2 light green, 2 lavender.
213	8/17.4	Misc. fragments- 2 clear, 1 dark green, 1 amber, 4 light green.
218	2/2.1	Misc. fragments- 2 amber.
QER/J-1		
223	9/30.9	Misc. fragments- 8 dark green, 1 blue.
225	100/311.9	Misc. fragments- 9 clear, 34 dark green, 10 amber, 5 light green, 28 blue, 4 lavender.
226	1/69.1	Dark green bottle neck type b (Champagne).
227	1/20.2	Clear, molded glass fragment with cross-hatched design, ? type vessel.
233	14/37.3	Misc. fragments- 2 clear, 3 dark green, 2 amber, 5 blue, 2 lavender.

TABLE 9: GLASS ARTIFACTS

234	3/152.7	Misc. fragments- 2 clear, 1 dark green champagne-type b bottle base.
QER/M-1		
238	6/12.9	Misc. fragments- 2 clear, 2 dark green, 2 amber.
242	13/33.2	Misc. fragments- 10 dark green, 3 amber.
244	2/1.6	Misc. fragments- 2 amber.
QER/V		
251	2/9.6	Misc. fragments- 1 clear, 1 dark green.
256	6/64.2	Misc. fragments- 3 clear, 2 light green, 1 milk.
QER/V-2		
258	2/52.4	Misc. fragments- 1 light green, 1 lavender.
QER/C-1		
274	23/897.6	Misc. bottle fragments- 10 pieces amber, including four necks- 3 type d, 1 type g (Patent/extract), 4 lavender, including 2 type g (Patent/extract) necks and one type c (Brandy); 1 dark green, type f (Double bead); 6 light green necks, 1 with type g, 2 type d(Beer), 1 base with molded mark- "Pat. Aug. 22. 05"; 1 clear neck, type i (Oil); 1 blue neck, type h (Wide mouth patent/extract).
QER/H-1		
280	3/319.0	Bottle neck fragments- 2 dark green, 1 type l, 1 type b; 1 clear, type c.
QER/I-1		
281	1/33.7	Lavender bottle neck, type g.
QER/J-1		
283	3/150.9	Bottle neck fragments- 2 dark green type l and type b; 1 amber type k.
286	1/165.6	Amber bottle base fragment with molded mark- "Southern Cal., Los Angeles", around rim, "Wine Co." in center.
QER/K-1		
288	1/324.7	Light green base with molded mark- "A.B.Co., A 6".
QER/M-1		
291	1/133.2	Electrical insulator
QER/N-1		
294	14/872.2	Bottle neck fragments- 5 dark green type b, 4 type f; 1 lavender type f, on a molded rectangular bottle; 2 clear, 1 type k, 1 type c; 1 blue type h; also 1 light green base with molded mark- "A.B.Co. 18".
QER/O-1		
296	2/160.1	Misc. vessel fragments- 1 amber bottle base with molded mark- "Pat. D Aug. 24. 1886" around rim, "2" in center; 1 ink bottle with 4 mold seams, bottle type mm.
QER/S-2		
298	14/648.1	Misc. bottle neck fragments- 2 bright green with type k neck; 3 amber with 1 type f, 2 screw-on tops, one being a jug-type with a small handle on the neck; 1 clear with a painted green exterior and screw top; 8 clear, 7 screw-ons and one with a metal crimped top.
QER/T		
300	2/119.5	Misc. vessel fragments- 1 clear bottle neck type k; 1 milk glass bowl fragment with a gold rim, molded mark on base- "Fire King, Oven Ware, Made in U.S.A.".
QER-V		
303	9/599.8	Misc. vessel fragments- 1 clear jar/bottle base, "Table Products Co., Los

TABLE 9: GLASS ARTIFACTS

		Angeles, 118 41"; 3 amber bases, 2 marked with "PUREX"; a small amber bottle neck with "Clorox" molded around neck; also a small amber square dropper bottle with a screw-on rubber handled glass dropper in place; 1 light-blue small rectangular bottle fragment; 2 pieces of a dark blue glass plate.
QER/V-1		
307	6/196.2	Misc. vessel fragments- 2 clear bottle necks, 1 type k, 1 type h; 2 clear small rectangular bases; 2 lavender necks, both type g.
QER/V-2		
309	1/74.7	Milk glass cosmetic jar with screw-on top, "Pond's" molded onto the base.
QER/V-3		
311	1/120.6	Light green bottle base with mark- "A.B.Co., J 4".
QE/Mill		
316	19/1,830.8	Misc. vessel fragments- 2 amber bases with marks, 1 with "R&Co., 32", 1 with "I P G Co." in a diamond over "3095"; 1 amber type d bottle neck, 2 fragments from a thin-walled vessel with "Uricsol" molded onto the side; 2 lavender bottle necks, 1 type f, 1 type g; 1 blue base; 11 light green pieces including 2 large vessel bases with "W T & Co.", molded onto the bottom, also 2 standard sized bases, "A.B.Co." molded onto one, also 2 necks, 1 type h, 1 type f, also 2 pieces of glass chemical tubing, in addition to 3 fragments of a large chemist's type jar (type h top).
Karma/Assay		
321	19/100.5	Misc. fragments, all clear- 1 screw-on type jar piece, 4 pieces window glass, 14 pieces of a thin-walled vessel, ? i.d.
Karma/Mill		
332	3/15.7	Light green glass tubing fragments- laboratory equipment.
SC/A-4		
333	1/1.0	Milk glass bead.

TABLE 10: BUTTONS

Catalog # (Site/Feature)	#/wt (gms)	Description
C/Wegmen		
SC/A-2 (Unit 1)		
6	1/.3	Milk glass with four-perforations.
SC/A-4 (Unit 2)		
17	1/2.6	Metal stemmed with no mark.
76	1/.4	Fragment of a mother-of pearl button, ? type
SC/M (Unit 3)		
98	1/.8	Small shell button with two perforations
QER/Cobble City		
QER/J-1 (Unit 3)		
224	1/2.8	Metal stemmed with no mark.
QER/M-1 (Unit 5)		
246	1/2.8	Stemmed, metal, with mark- "Head light"
QER/C-1 (Surface)		
273	1/2.5	Stemmed, metal, with mark- "Red Seal" within a sunburst design.
QER/H-1 (Surface)		
277	1/2.1	Stemmed, metal, with no mark.
QER/J-1 (Surface)		
282	3/7.9	3 stemmed, metal, with marks- 1 "Levi-Strauss Co.", 2 "Carhartt's".
QER/L-1 (Surface)		
289	6/17.0	6 stemmed, metal, with marks- 2 "Levi-Strauss Co.", 4 "Carhartt's".
QER/M-1 (Surface)		
93	1/.5	Milk glass with four perforations
QER/N-1 (Surface)		
295	2/1.7	1 Milk glass with four perforations; 1 mother-of-pearl with 2 perforations.
QER/T (Surface)		
299	2/3.9	1 stemmed, metal, no mark, 1 flat metal with a wire loop at back.
QER/U (Surface)		
302	1/4.1	Large brass(?) button with wire loop at back, with a rope and anchor design.
QE/Mill (Surface)		
315	7/19.8	6 metal stemmed with marks- 1 "Strong Hold", 1 "Cone's Boss" with lantern design, 3 "Levi-Strauss Co.", 1 heart-shaped with a cablecar design under "Union Made" (Carhartt's), also 1 rivet with "L.S.&Co. , S.F."
319	2/1.1	2 mother-of-pearl, one with two perforations, one with four.

TABLE 11: LEATHER ARTIFACTS

Catalog #	#/wt (gms)	Description			
(Site/Feature)					
C/Wegmen					
SC/A-4 (Unit 2)					
66	25/12.4	Glove fragments			
75	2/2.1	Glove fragments			
89	25/11.1	Glove fragments			
SC/A (Surface)					
123	1/128.7	Fragment of a small sized shoe sole.			
124	1/60.8	Fragment of a small sized shoe, a woman's or child's.			
125	1/178.4	Upper portion of a boot, a lace-up type with hooks up the front and eyelets at the top; size and style correspond to that common to men at the turn-of-the-century.			
QER/Cobble City					
QER/H-1 (Unit 1)					
205	4/23.4	Non-i.d. fragments			
211	19/15.5	Non-i.d. fragments			
216	18/7.9	Non-i.d. fragments			
QER/J-1 (Unit 3)					
229	4/28.4	Shoe fragments of ? type.			
QER/M-1 (Unit 5)					
240	4/1.3	Non-i.d. fragments			
245	17/32.9	Shoe fragments of ? type.			
48	3/134.7	Fragments of a small shoe, probably a woman's.			

TABLE 12: FAUNAL REMAINS

Catalog # (Site/Feature)	#/wt (gms)	Description
C/Wegmen		
SC/A-4 (Unit 2, privy)		
36	4/2.3	4 large mammal longbone fragments, probably bovid, 1 with a saw cut.
48	4/2.3	4 large mammal fragments (probably bovid); 1 medium sized mammal, immature longbone fragment, burned.
53	3/2.5	3 large mammal longbone fragments (probably bovid), 1 with saw cut.
60	4/5.9	3 large mammal longbone fragments; 1 artiodactyl (deer/sheep/goat) juvenile metapodial fragment.
88	4/16.1	3 large mammal longbone fragments, 1 large mammal skull fragment
SC/M (Unit 3, dump)		
95	2/24.8	2 large mammal longbone fragments, including 1 O-bone.
SC/O (Unit 4, privy)		
110	45/73.9	45 large mammal longbone fragments, including shaft pieces and articular ends, all highly weathered.
116	10/16.3	2 large mammal longbone fragments; 8 non-i.d. fragments, all highly weathered.
QER/Cobble City		
QER/H-1 (Unit 1, privy)		
210	21/26.7	9 large mammal (15.5), 12 small mammal (11.2) - rabbit?
215	5/5.2	5 large mammal longbone fragments.
QER/H-1 (Unit 2, kitchen)		
220	1/2.9	1 large mammal
QER/J-1 (Unit 3, privy)		
230	5/23.7	5 large mammal longbone fragments, 2 saw-cut.
235	1/266.0	1 large mammal distal humerus fragment, probably bovid.
QER/V-3 (Unit 8, privy)		
264	2/8.7	2 large mammal longbone shaft fragments

8.0 FIGURES

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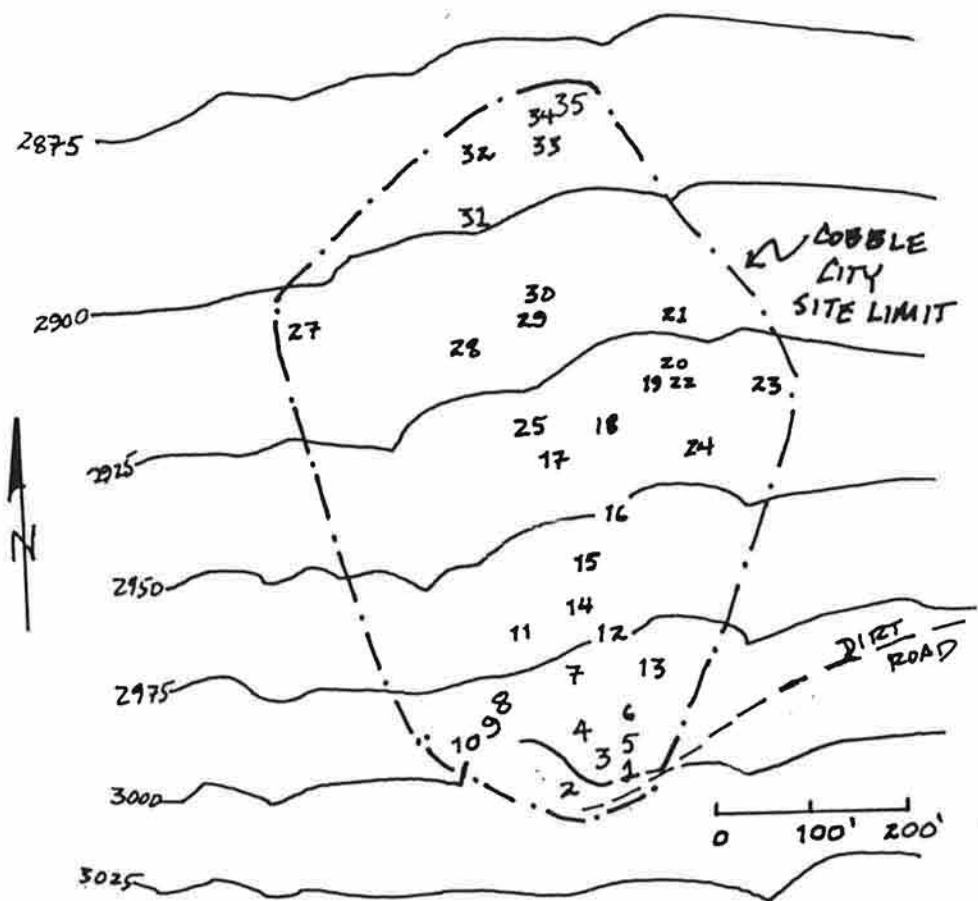


FIGURE 2: CA-KER-4446H, Cobble City, showing feature/structure locations (identified in attached key).

KEY TO FIGURE 2: FEATURES AT CA-KER-4446H (Cobble City)

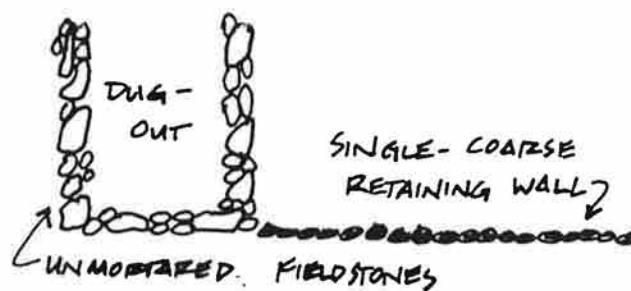
Map Designation	Feature
1	Structure G1, NE corner
2	J1 privy & excavation unit
3	Structure I1, NE corner
4	Structure J1, NE corner
5	Structure H1, NE corner
6	H1 privy & excavation unit
7	Structure K1, NE corner
8	J3 privy
9	J2a privy
10	J2b privy
11	L1 privy
12	Structure M1, NE corner
13	M1 privy & excavation unit
14	O1 privy
15	V2 pad, NE corner
16	V3 pad, NE corner
17	Structure V3, NE corner
18	V1 pad, NE corner
19	V dump & excavation unit
20	Structure T, NW corner
21	Structure U, NW corner
22	Structure S, NW corner
23	Structure R, NW corner
24	Structure S2, NW corner
25	V4 privy
26	(deleted)
27	Structure F1, NE corner
28	Structure E1, NE corner
29	Structure W, NE corner
30	Structure X, NE corner
31	Structure D1, NE corner
32	Structure C1, NE corner
33	Structure A1, NW corner
34	E water tank, S side, center
35	Structure B1, NW corner



STRUCTURE B1 & WATER TANKS



0 5 10'



STRUCTURE A1

FIGURE 3: Features A1 and B1 at CA-KER-4446H, Cobble City.

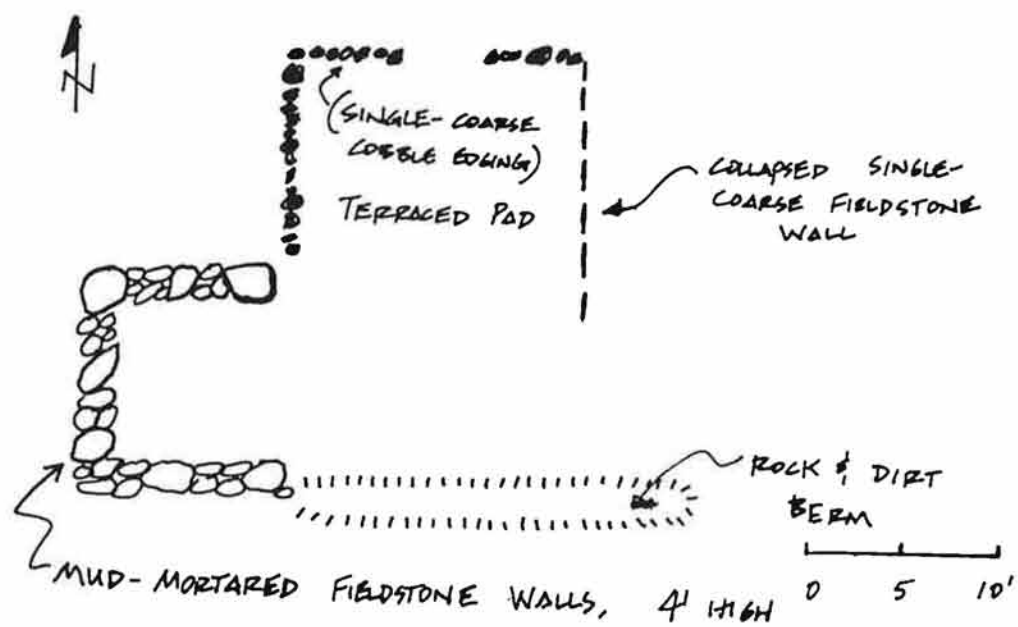


FIGURE 4: Feature C1 at CA-KER-4446H, Cobble City.

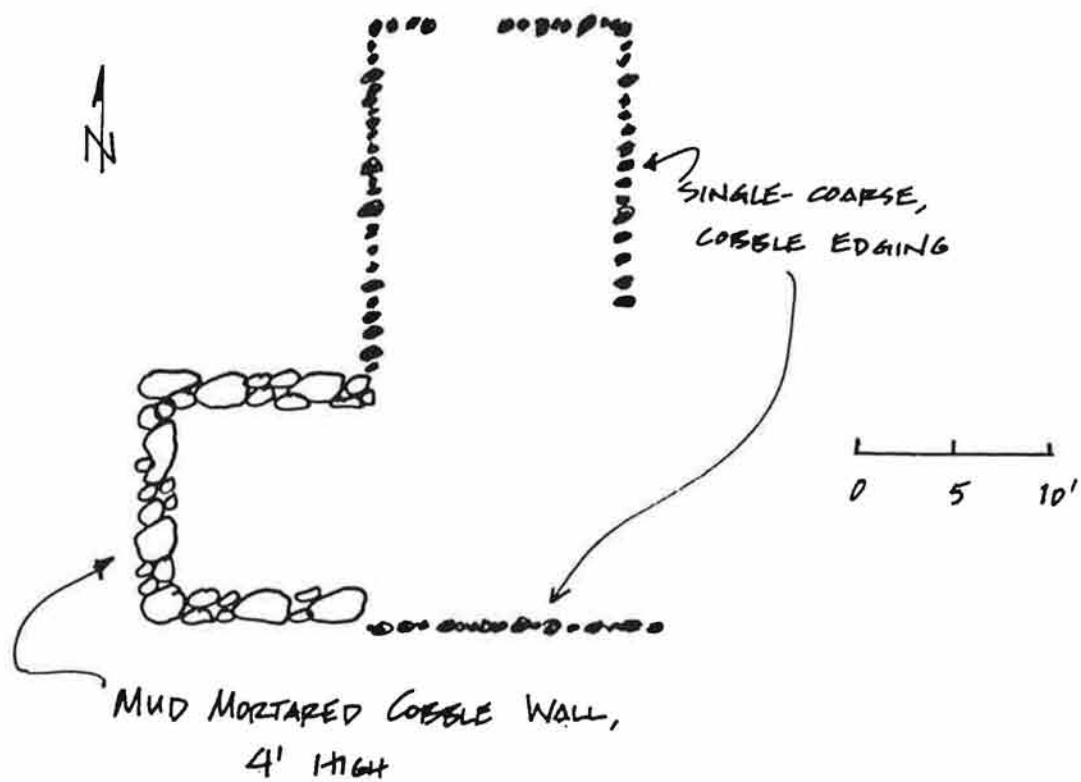


FIGURE 5: Feature D1 at CA-KER-4446H, Cobble City.

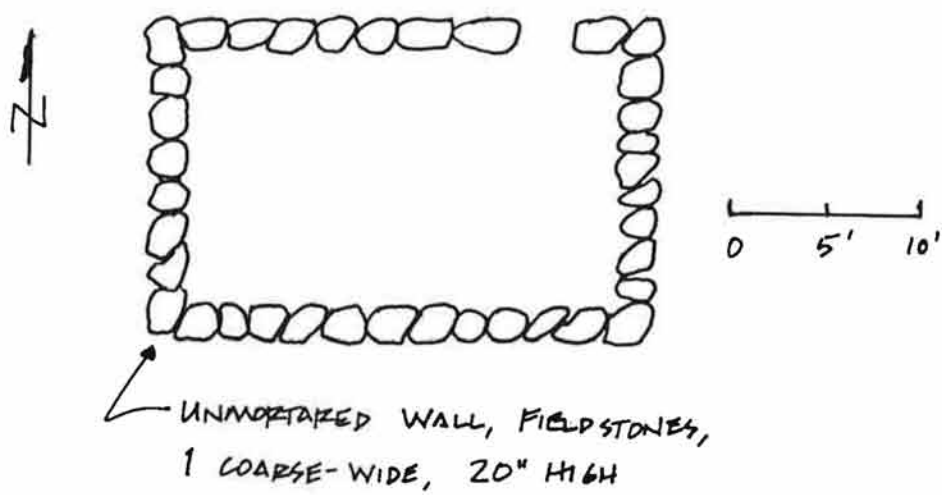


FIGURE 6: Feature E1 at CA-KER-4446H, Cobble City.

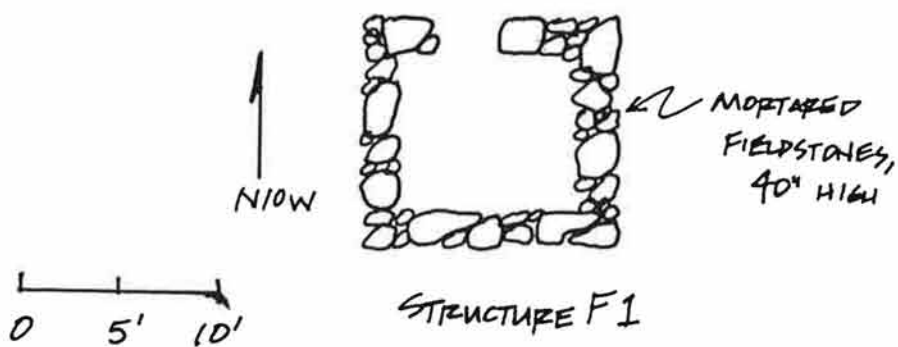
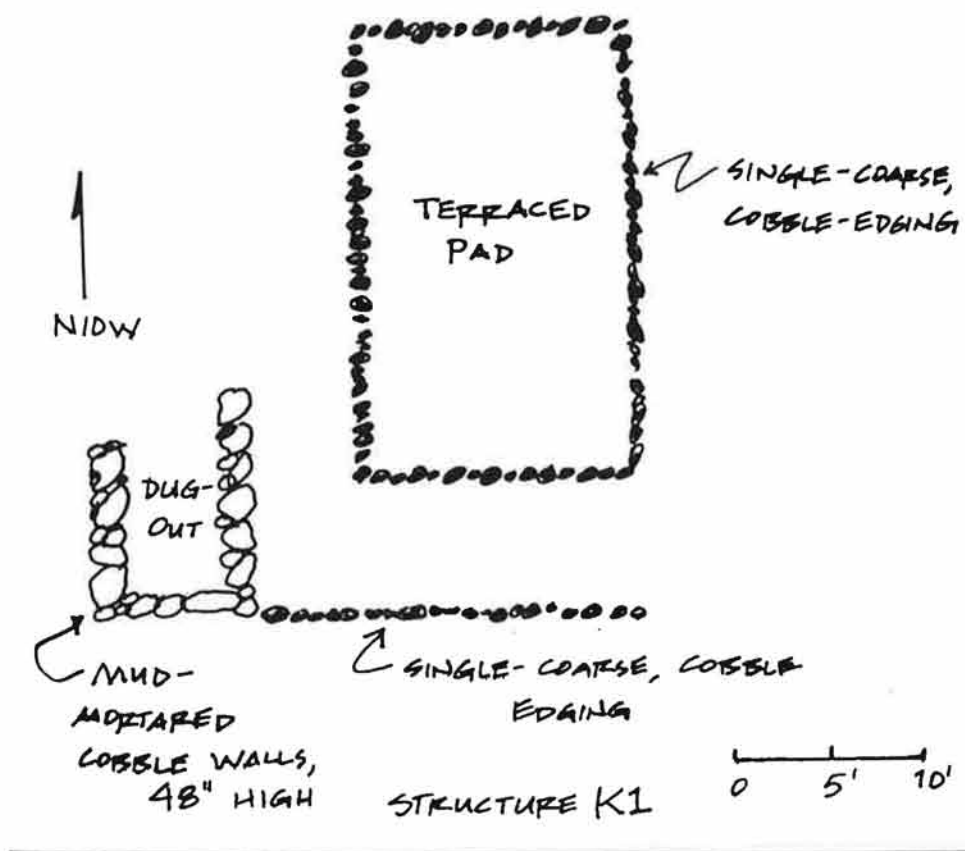


FIGURE 7: Features F1 and K1 at CA-KER-4446H, Cobble City.

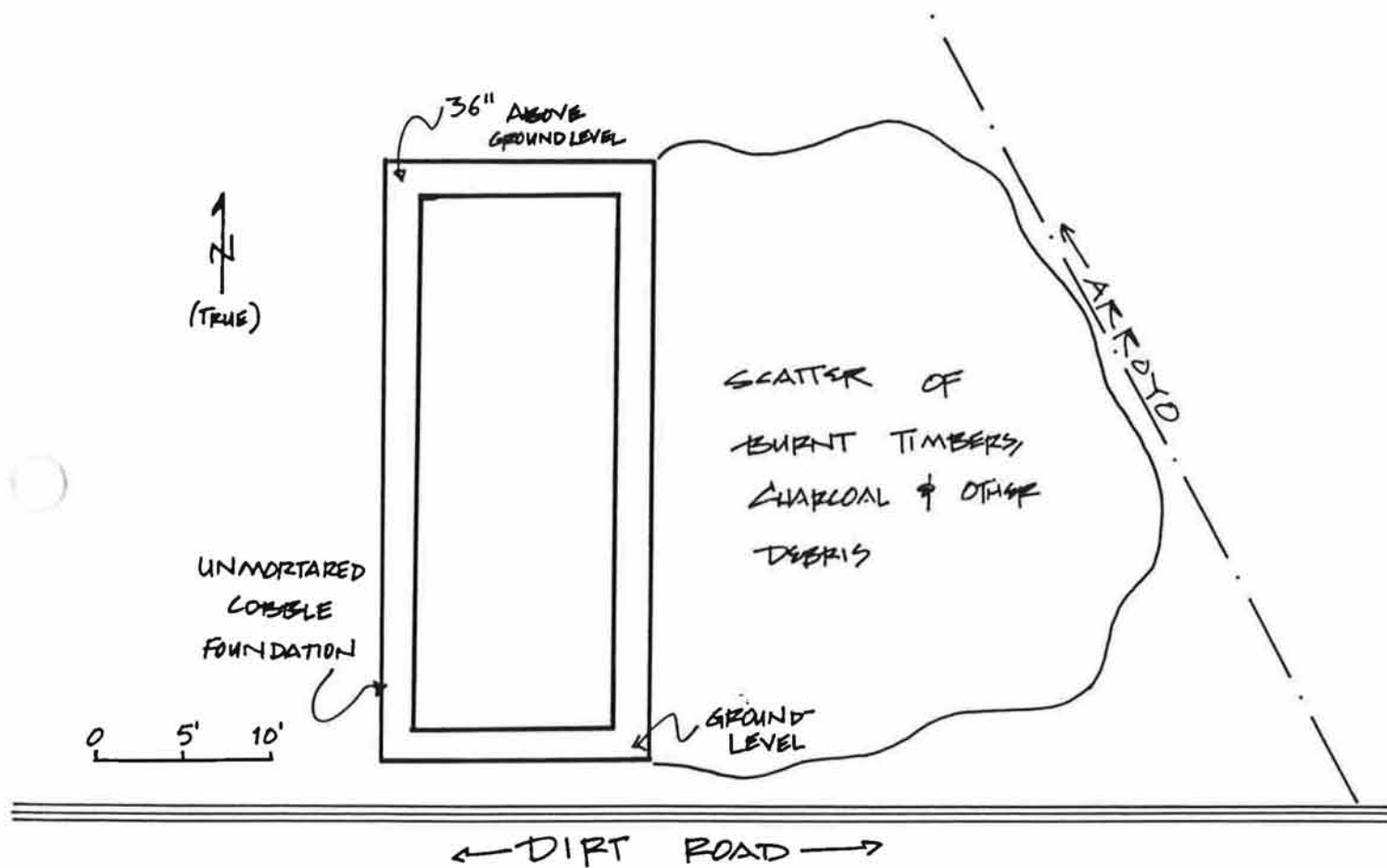


FIGURE 8: Feature G1 at CA-KER-4446H, Cobble City.

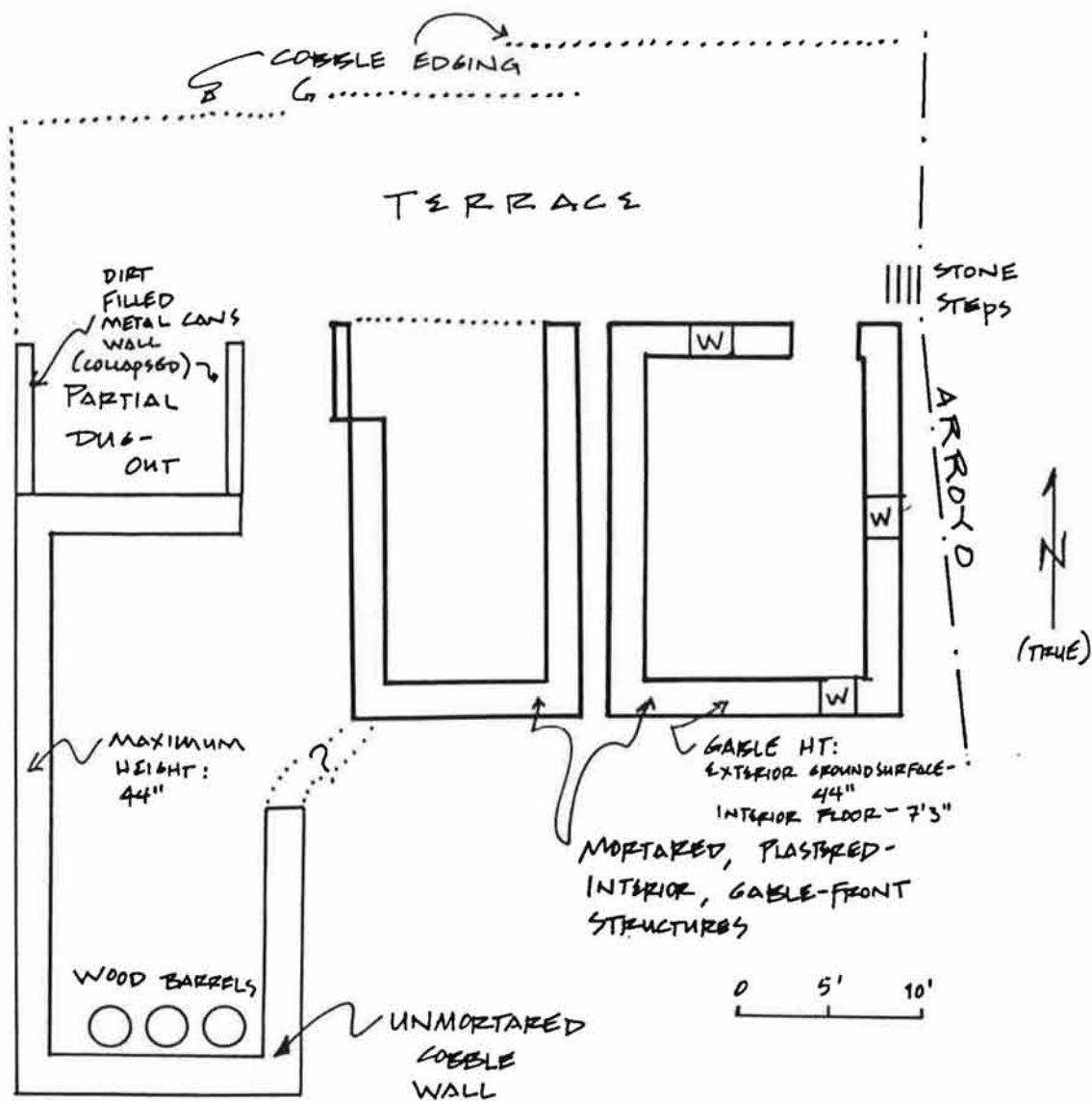


FIGURE 9: Feature complex H1 at CA-KER-4446H, Cobble City.



FIGURE 10: Feature H1 complex. Top - central rooms from N; bottom - east room from NE.

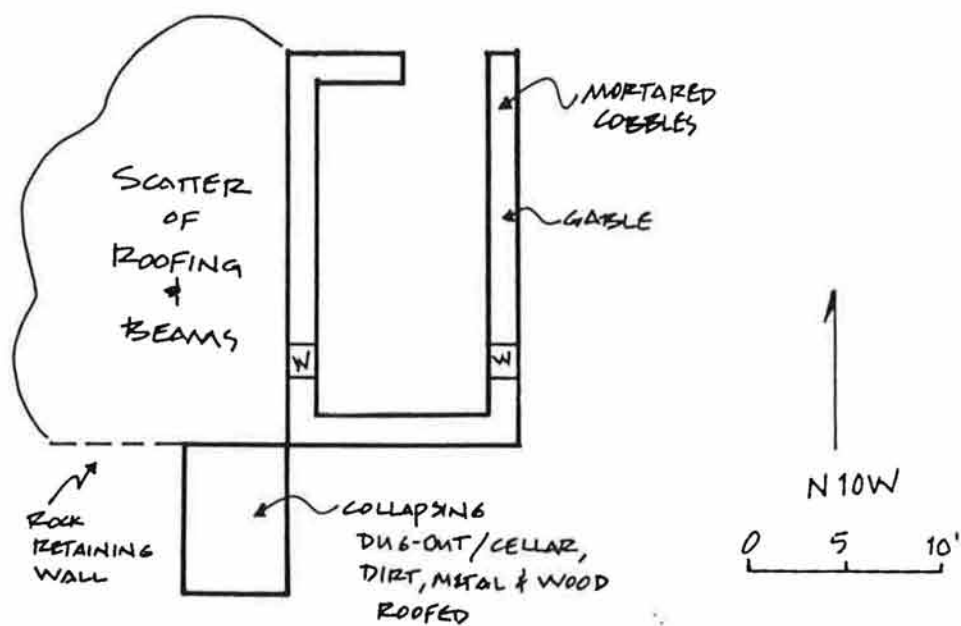


FIGURE 11: Feature 11 at CA-KER-4446H, Cobble City.

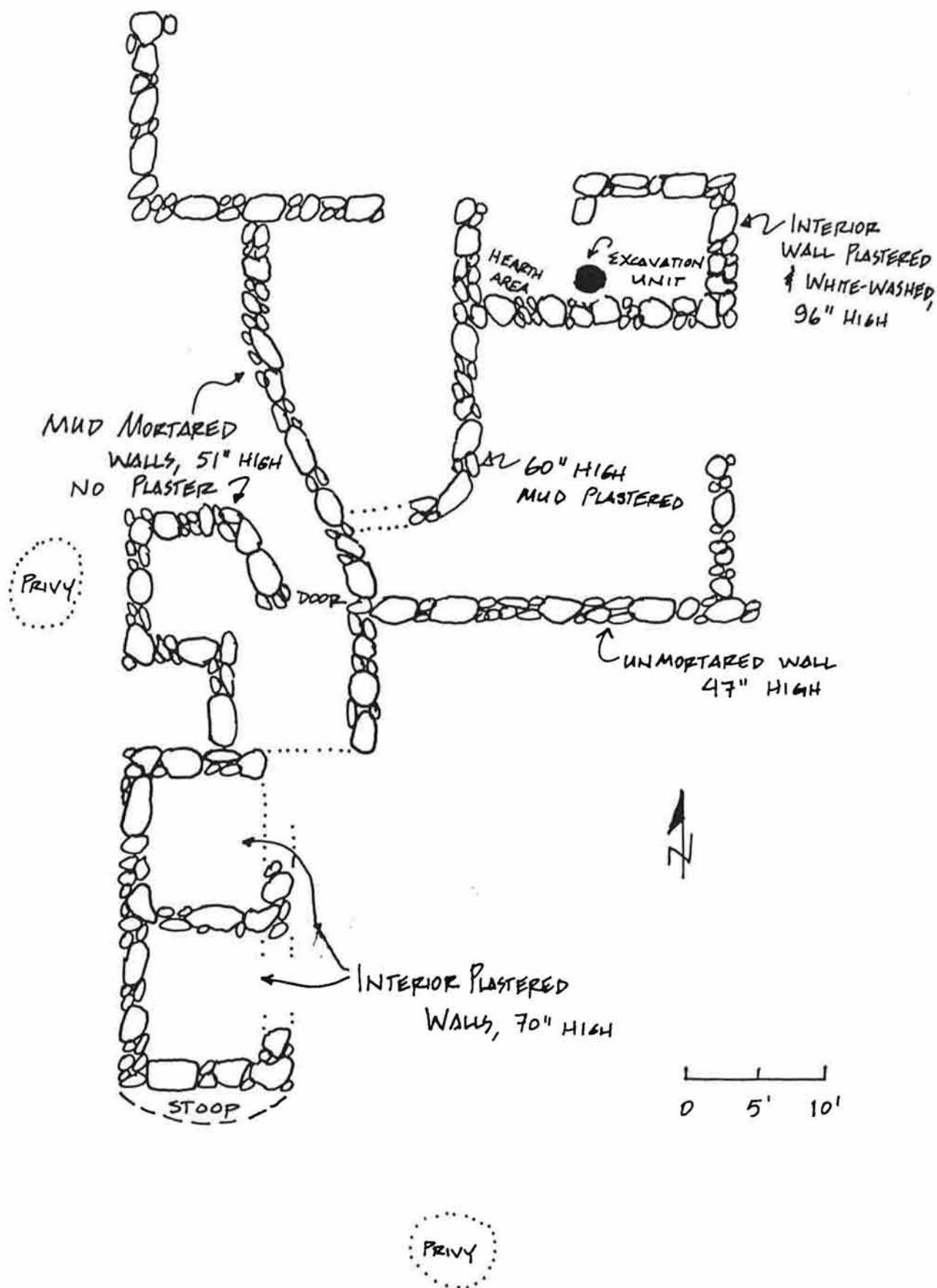


FIGURE 12: Feature J1 complex at CA-KER-4446H, Cobble City.



FIGURE 13: NE room (kitchen) at J1 complex; note inset shelving.

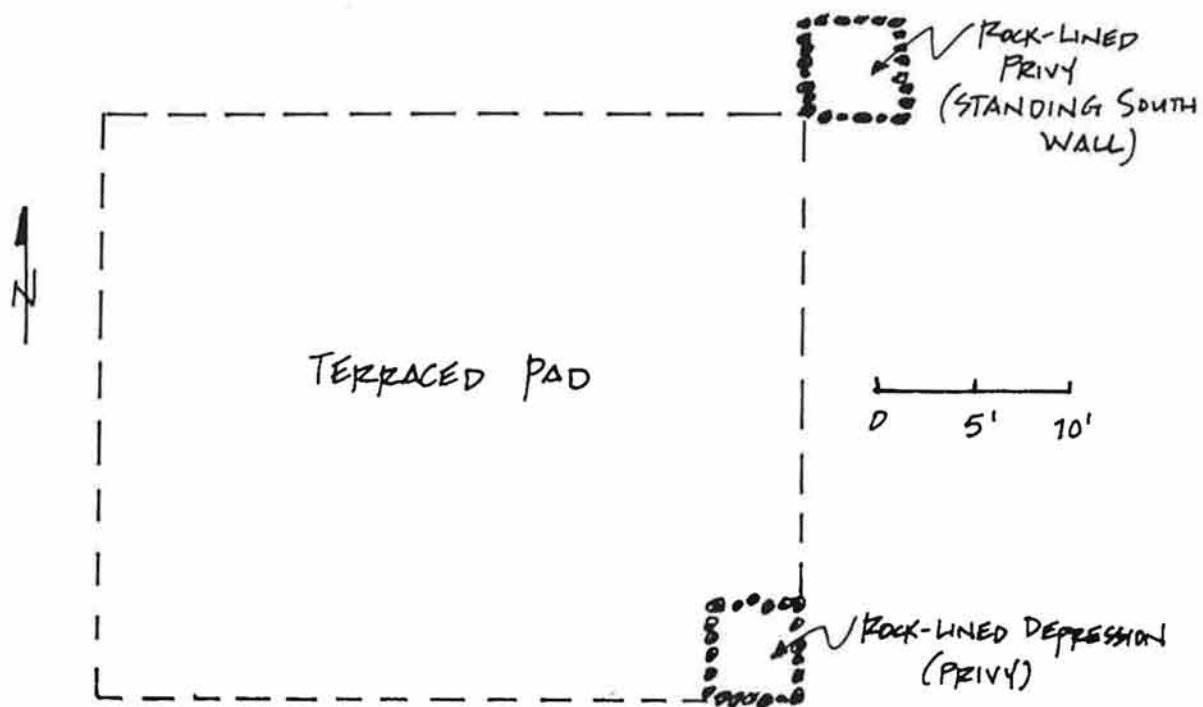


FIGURE 14: Pad L1 at CA-KER-4446H, Cobble City.

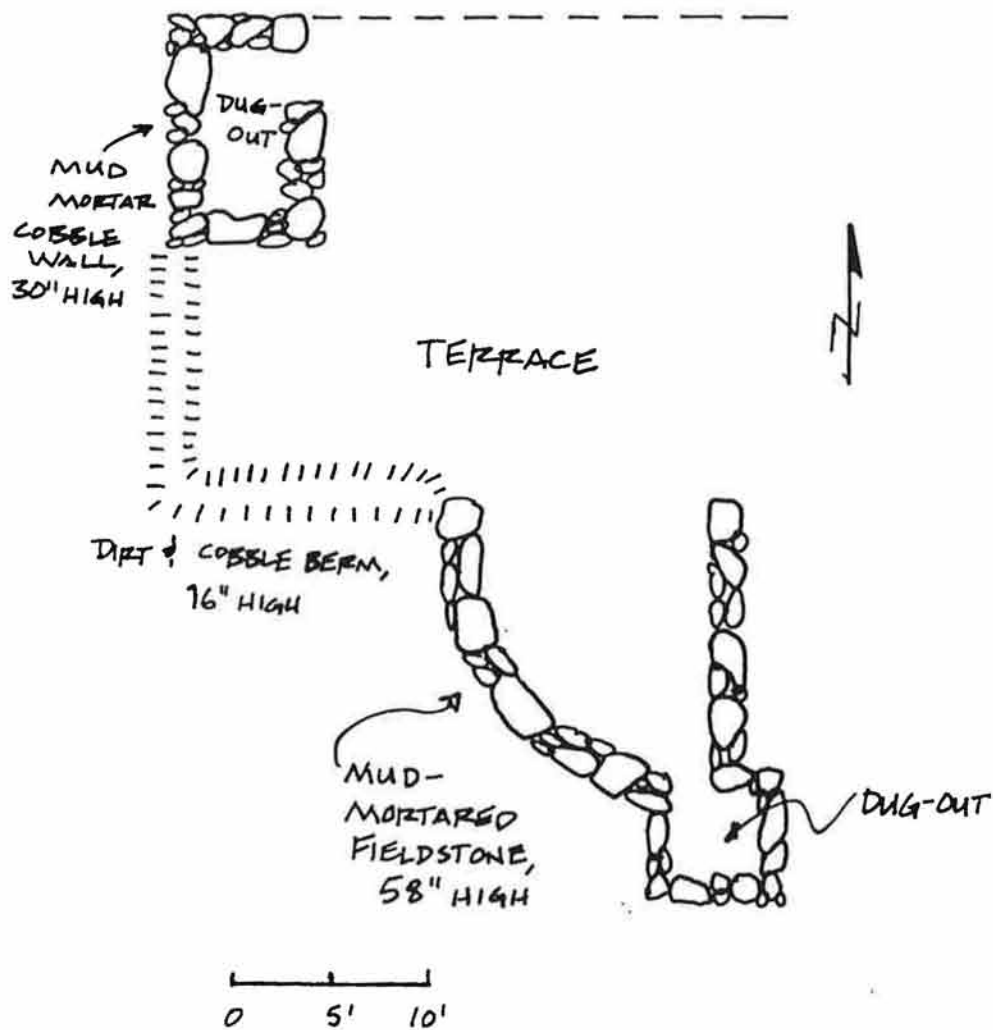


FIGURE 15: Feature M1 at CA-KER-4446H, Cobble City.

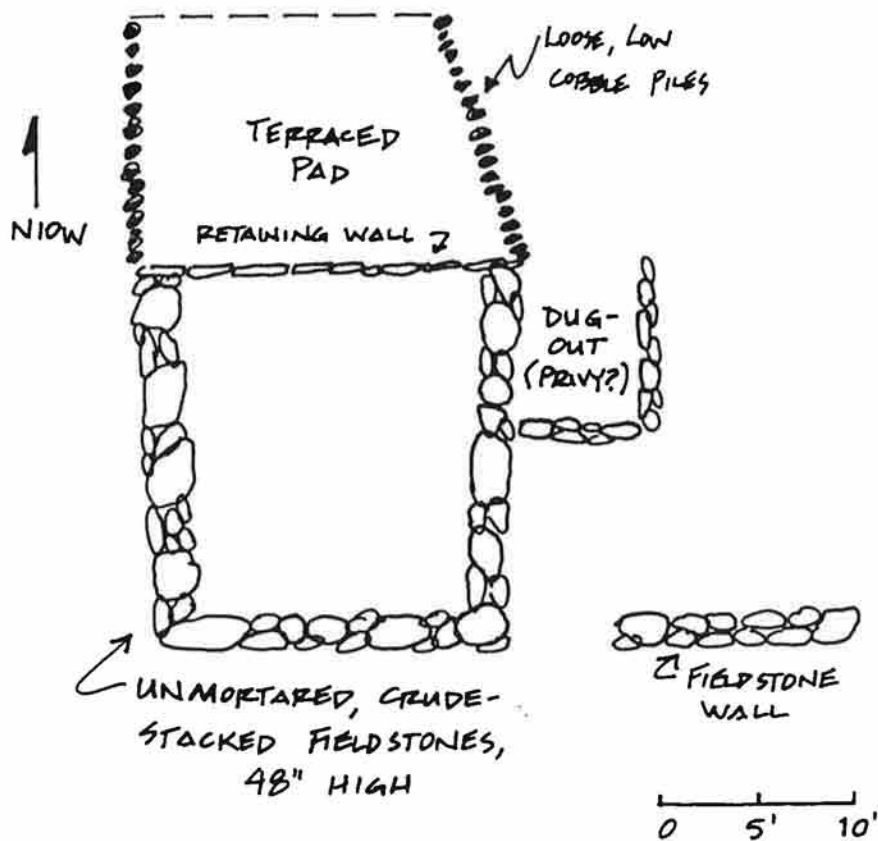


FIGURE 16: Feature N1 at CA-KER-4446H, Cobble City.

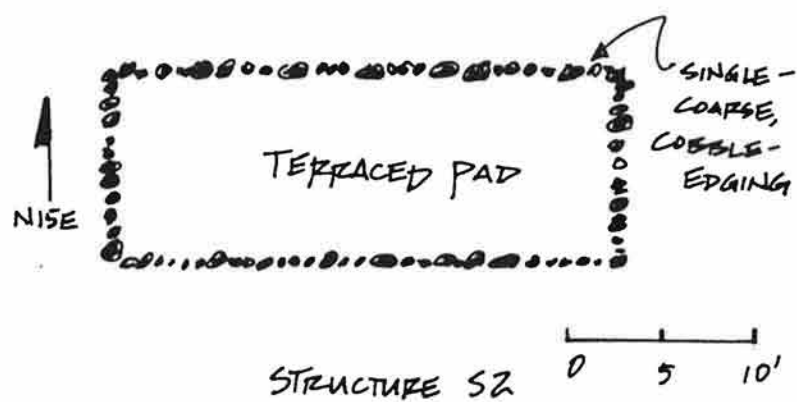
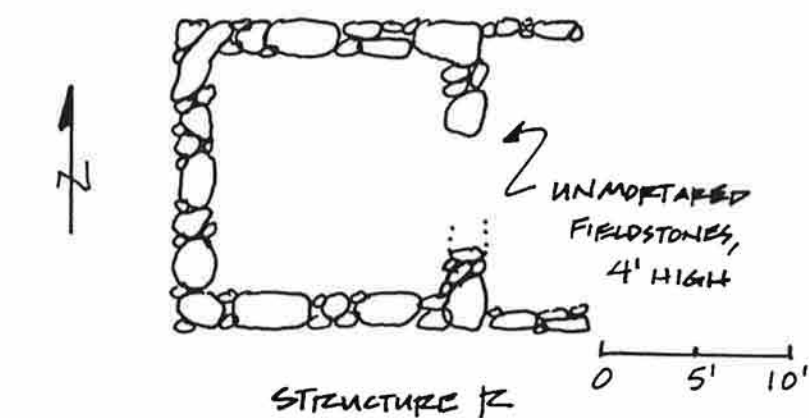


FIGURE 17: Features R and S2 at CA-KER-4446H, Cobble City.

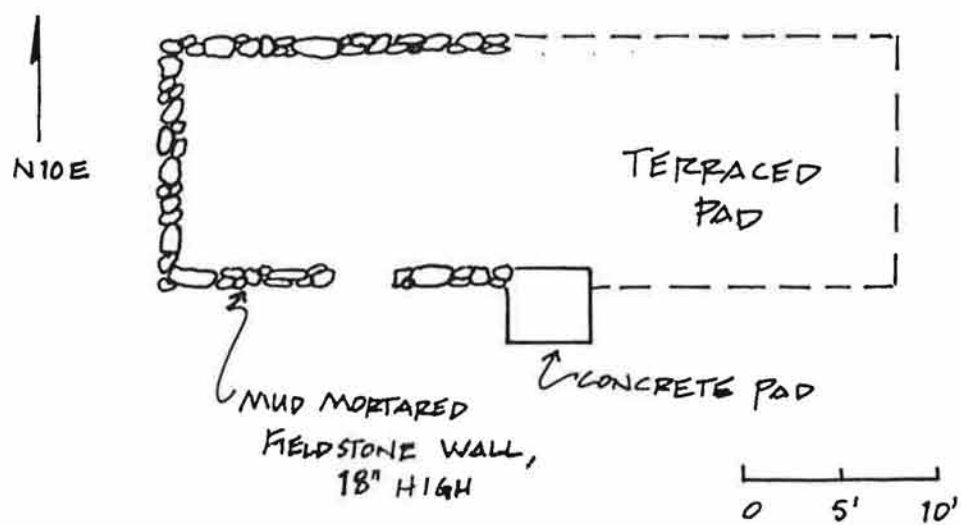


FIGURE 18: Feature S at CA-KER-4446H, Cobble City.

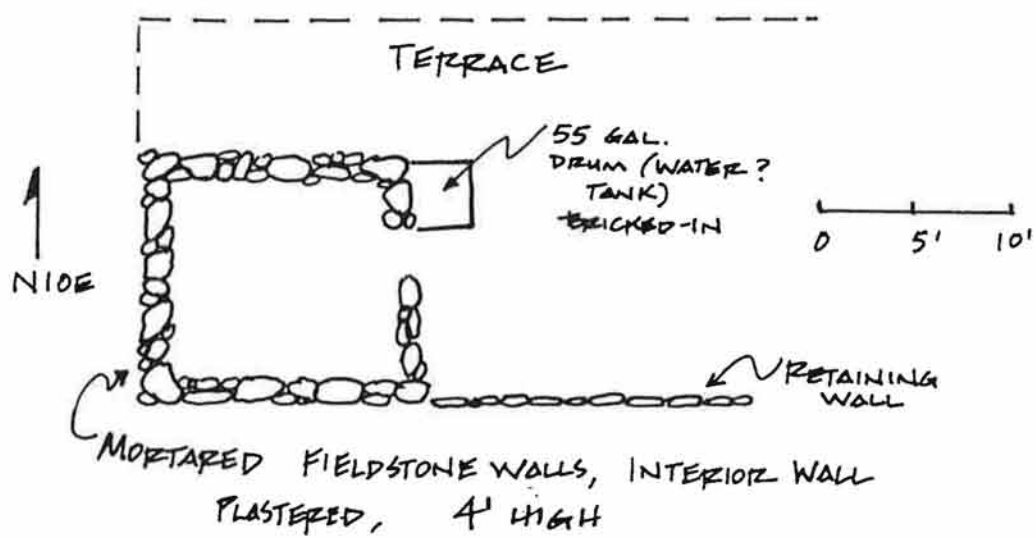


FIGURE 19: Feature T at CA-KER-4446H, Cobble City.

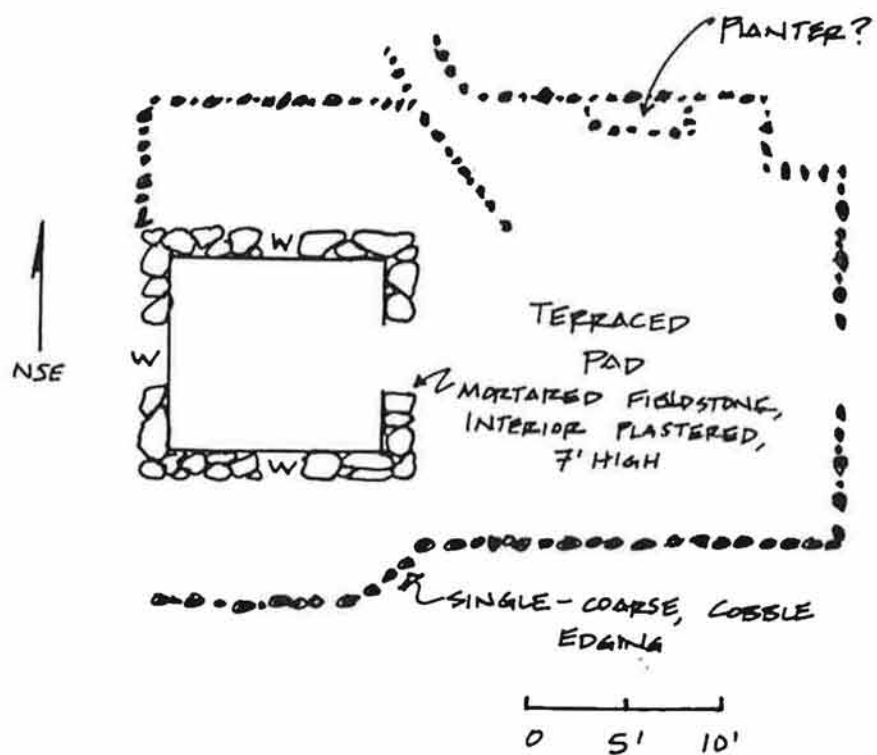


FIGURE 20: Feature U at CA-KER-4446H, Cobble City.

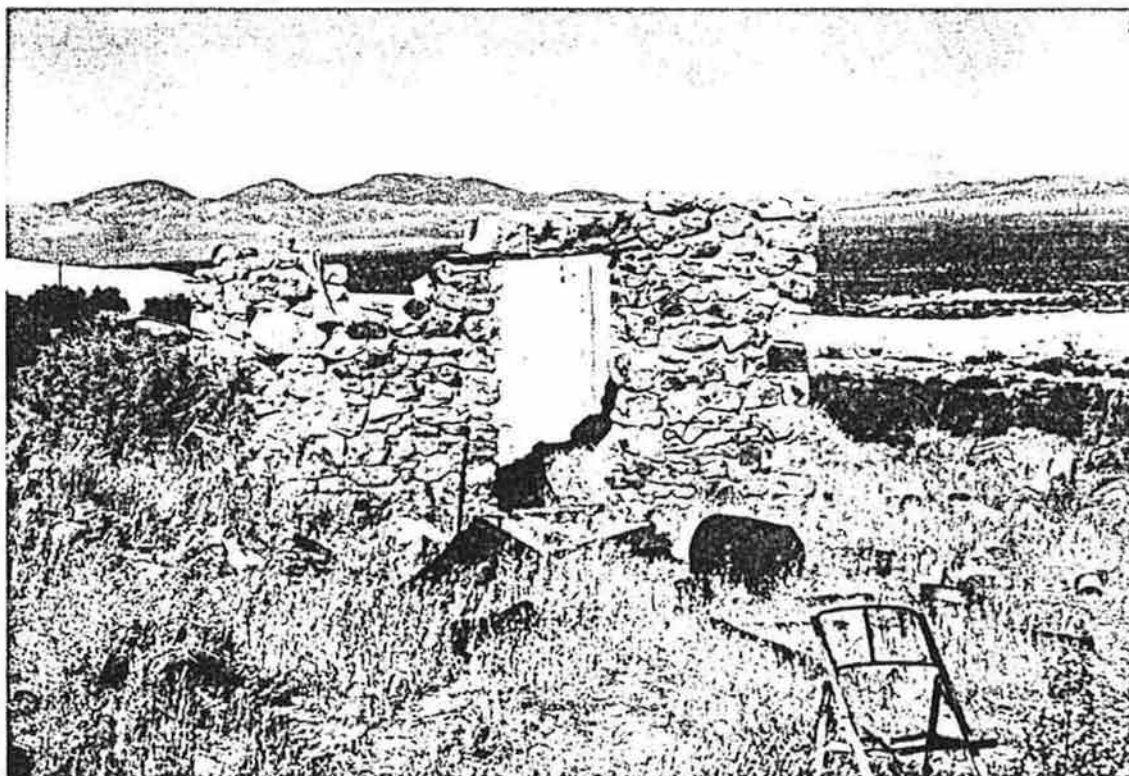


FIGURE 21: Structure U, viewed from SE. Note interior plaster and Depression era remains in yard.

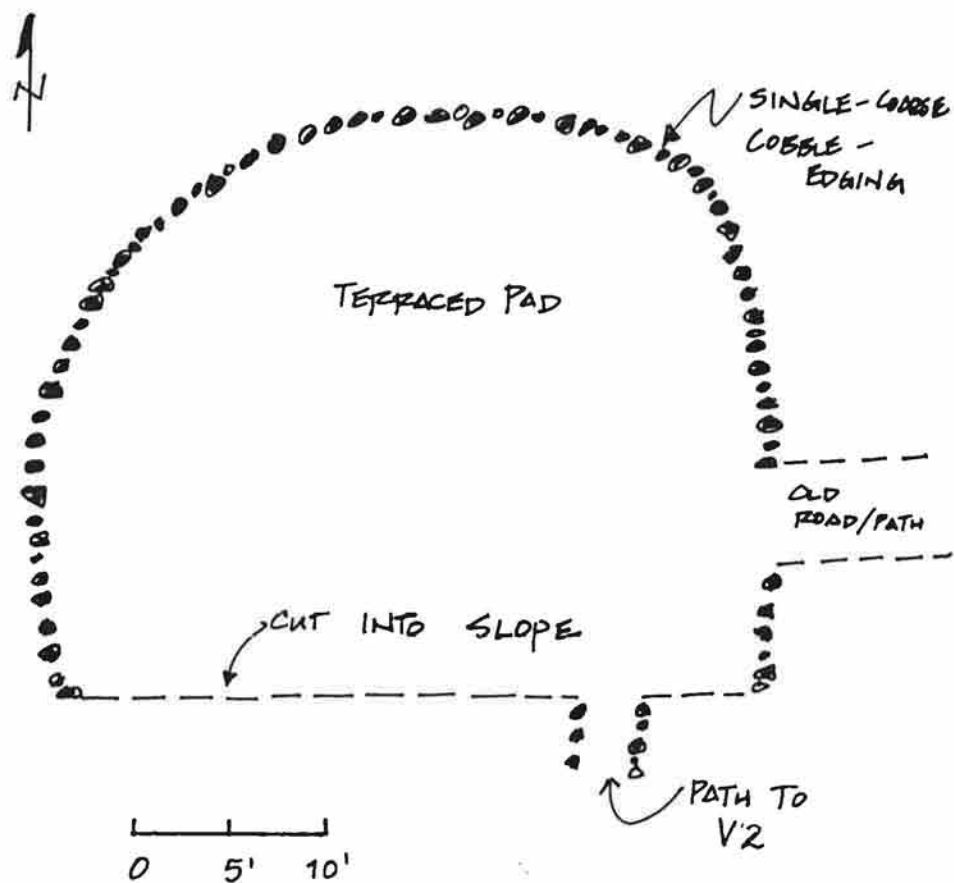


FIGURE 22: Feature 22 at CA-KER-4446H, Cobble City.

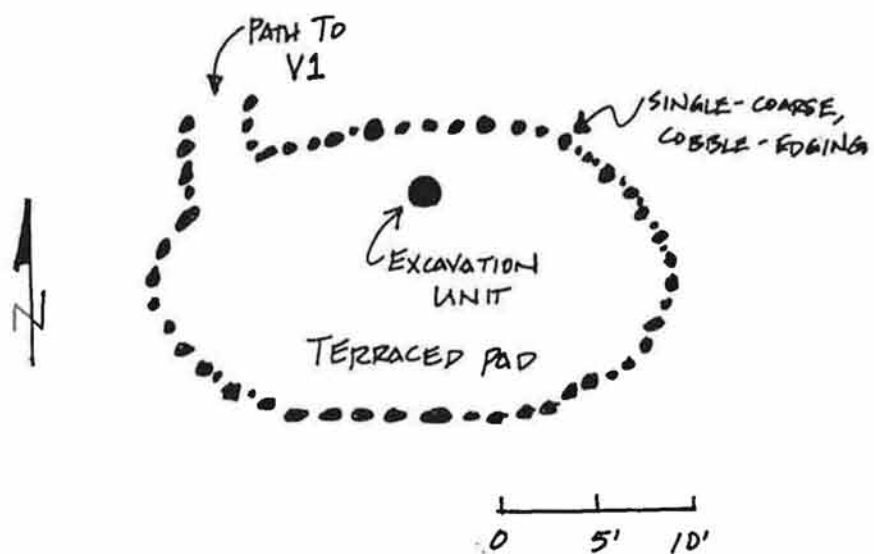


FIGURE 23: Pad V2 at CA-KER-4446H, Cobble City.

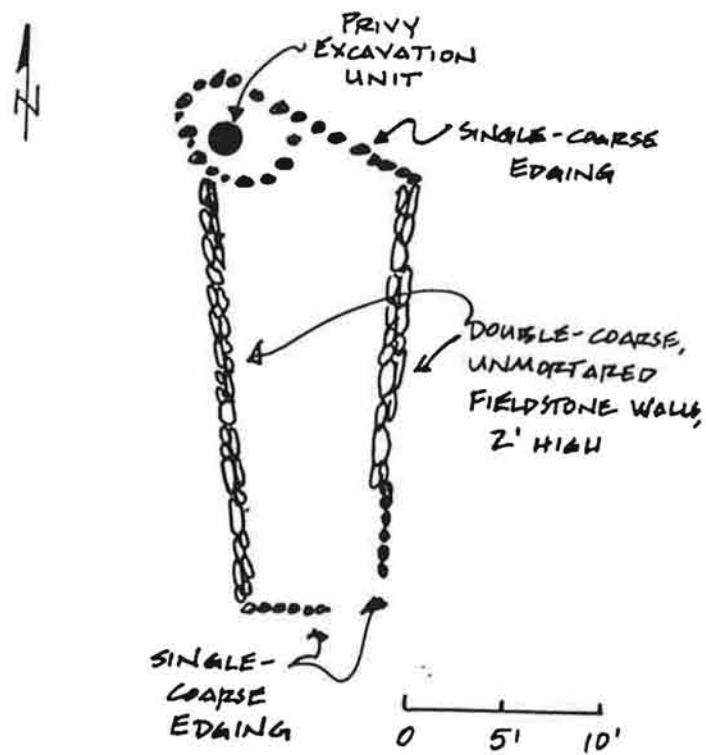


FIGURE 24: Feature V3 at CA-KER-4446H, Cobble City.

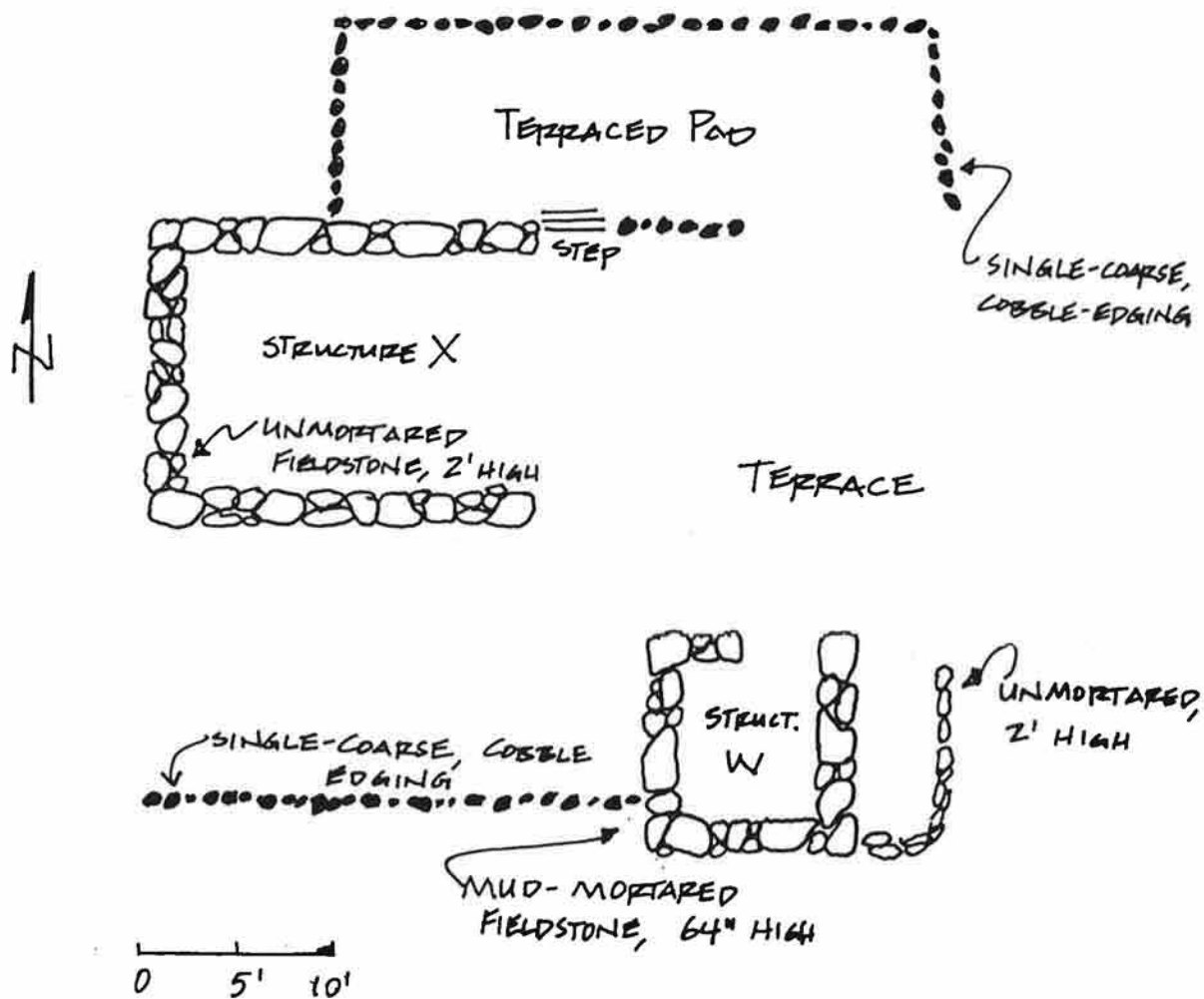


FIGURE 25: Features X and W at CA-KER-4446H, Cobble City.

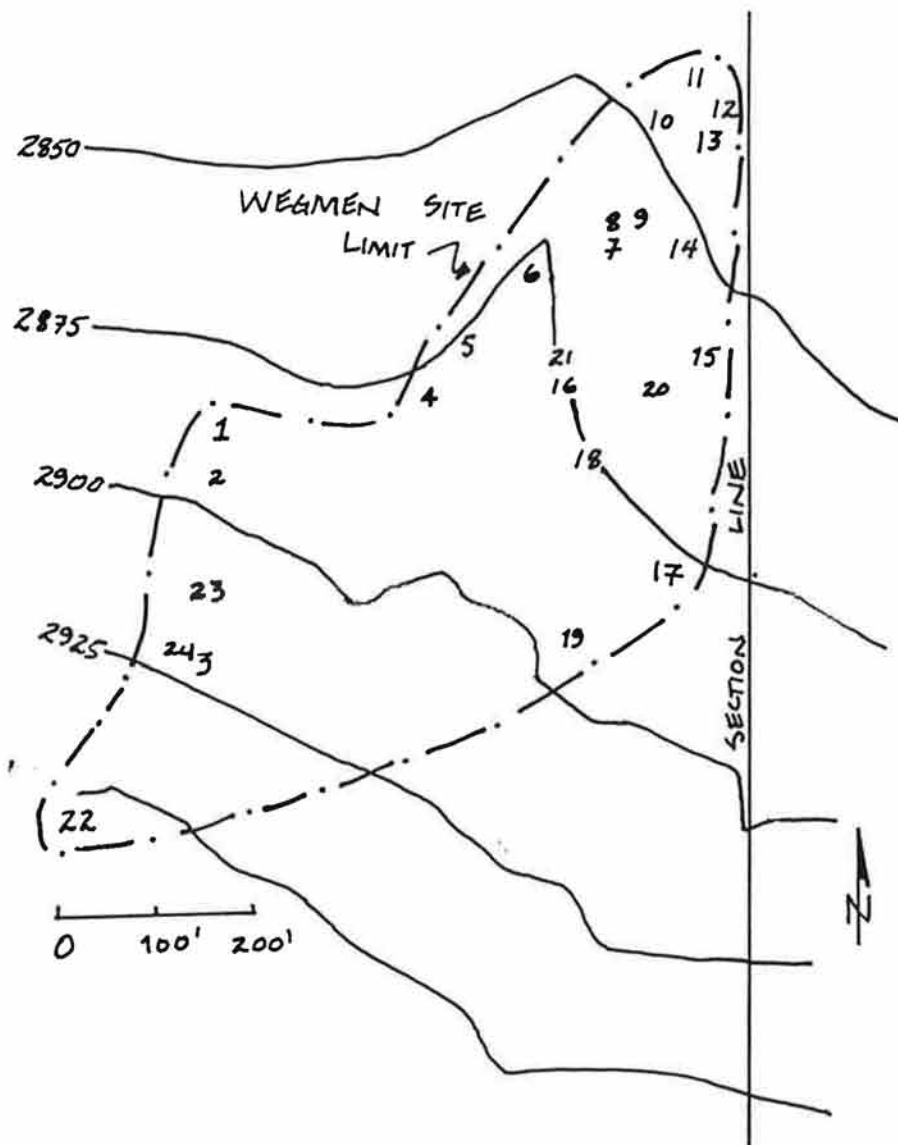


FIGURE 26: CA-KER-4447H, Wegmen complex, showing feature/structure locations, identified by attached key.

KEY TO FIGURE 26: FEATURES AT CA-KER-4447H (Wegmen)

Map	Designation	Feature
1		Structure C (Wegmen house), NE corner
2		Survey marker
3		Structure A, NE corner
4		Privy D, NE corner
5		Dump F, S side
6		Reymart-Fraction head frame, NW side
7		Privy L, NW corner
8		Structure O privy & excavation unit
9		Structure O, NW corner
10		N4 privy
11		Structure N5, SE corner
12		Structure N3, SW corner
13		Structure N2, SW corner
14		Structure N, Sw corner
15		Dump M excavation unit
16		Structure K, NW corner
17		Dump M2
18		Wood-framed hole, SE corner
19		Structure I, NW corner
20		Structure J, SE corner
21		Structure H, NW corner
22		Structure A2, NE corner
23		Structure B, NE corner
24		A4 privy & excavation unit

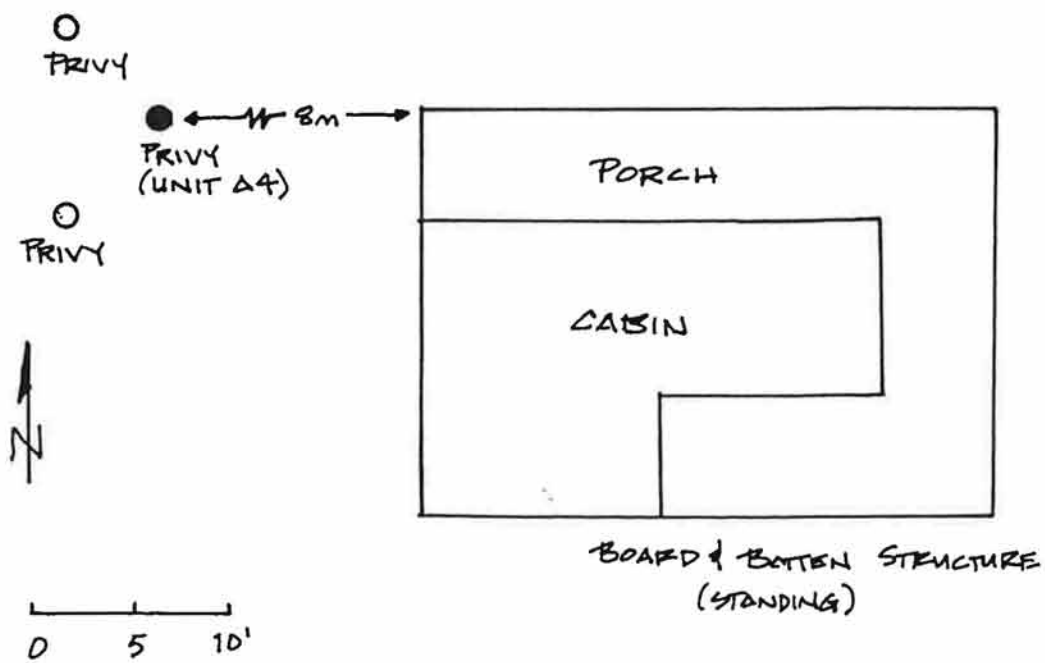


FIGURE 27: Structure A at CA-KER-4447H, Wegmen complex.

FIGURE 28: Structure A. Top - from N; Bottom - from E.

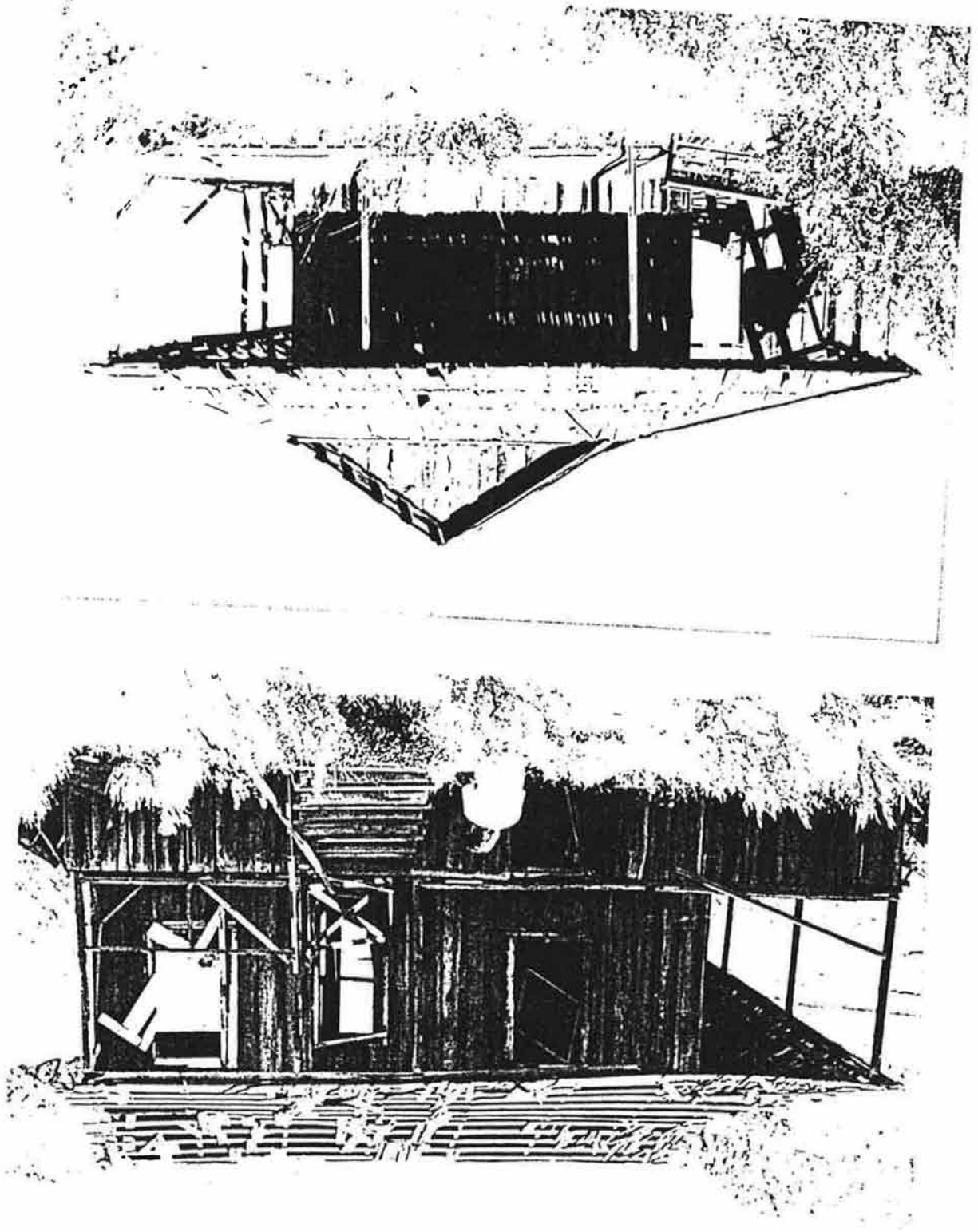
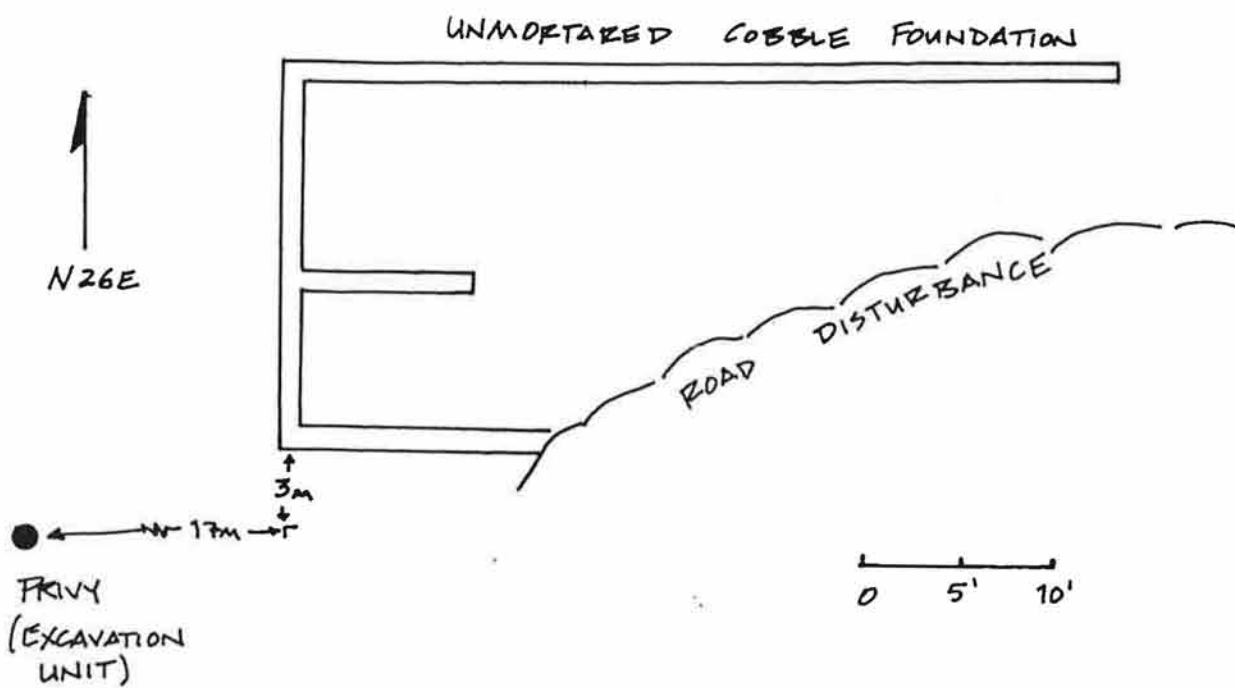




FIGURE 29: Structure A from SW. Note fallen addition in foreground left.



A2

FIGURE 30: Structure A2 at CA-KER-4447H, Wegmen complex.



FIGURE 31: Structure B, a fallen wood cabin, at CA-KER-4447H, Wegmen complex. The Wegmen house roof line is in the background.

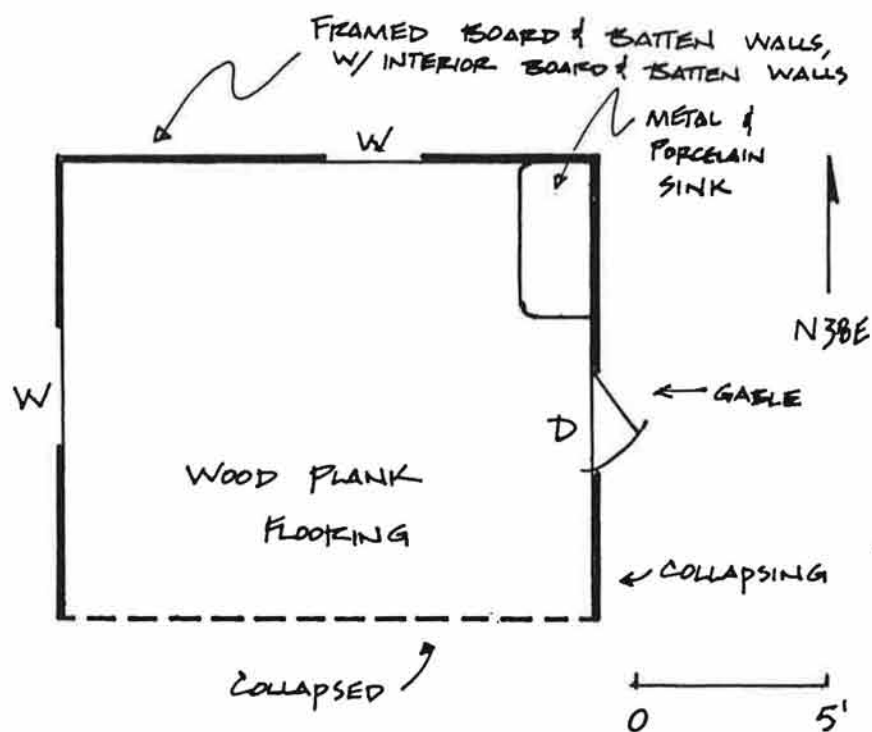


FIGURE 32: Structure H at CA-KER-4447H, Wegmen complex.



FIGURE 33: Structure H from NE.

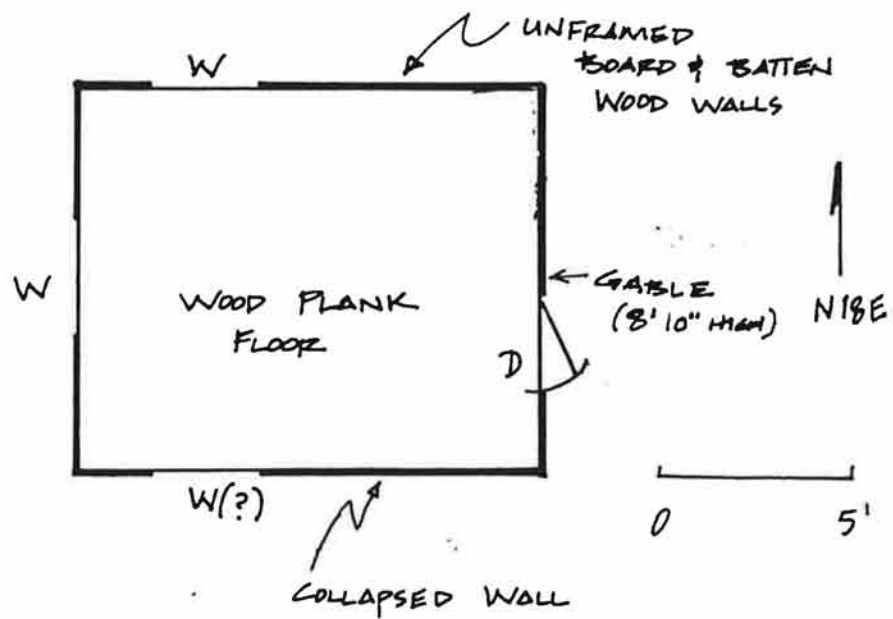


FIGURE 34: Structure I at CA-KER-4447H, Wegmen complex.

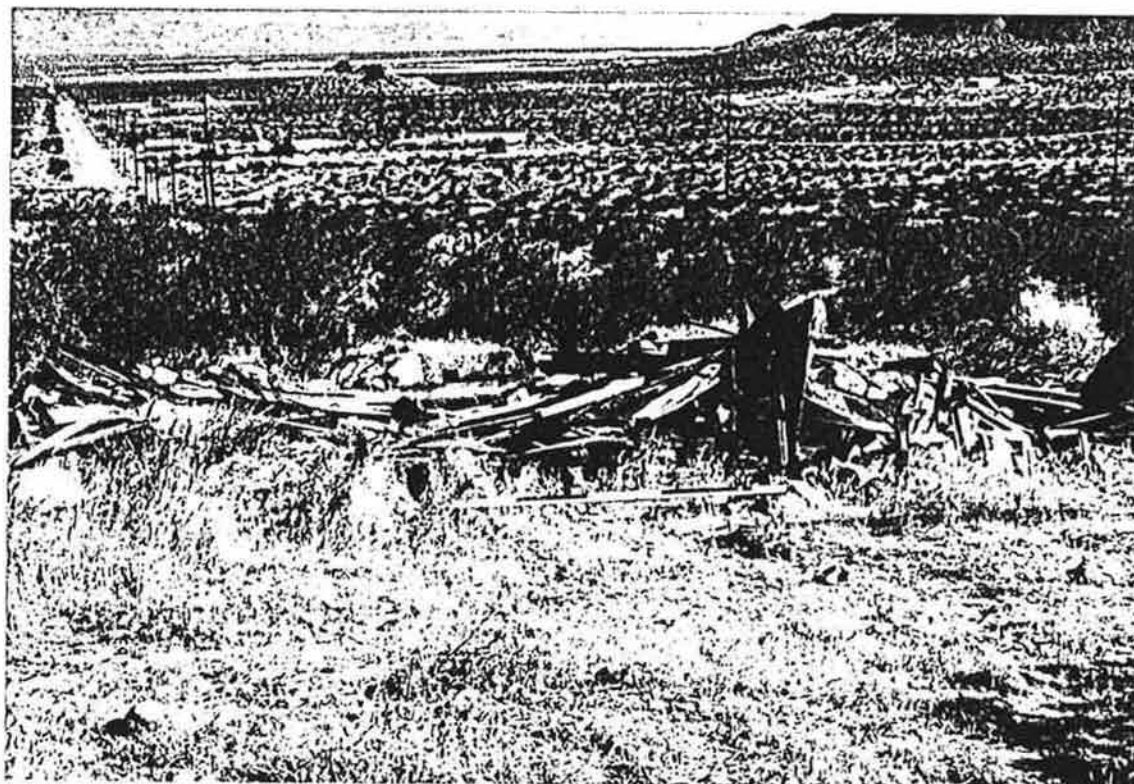


FIGURE 35: Structures I and K at CA-KER-4447H, Wegmen complex.
Top - I from SE; Bottom - K from S.

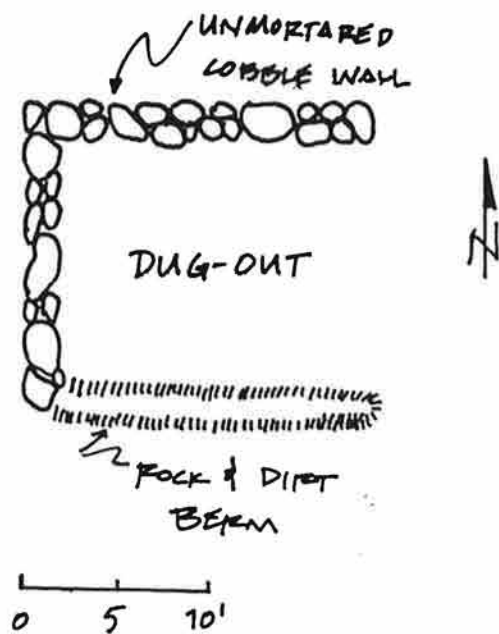


FIGURE 36: Structure L at CA-KER-4447H, Wegmen complex.

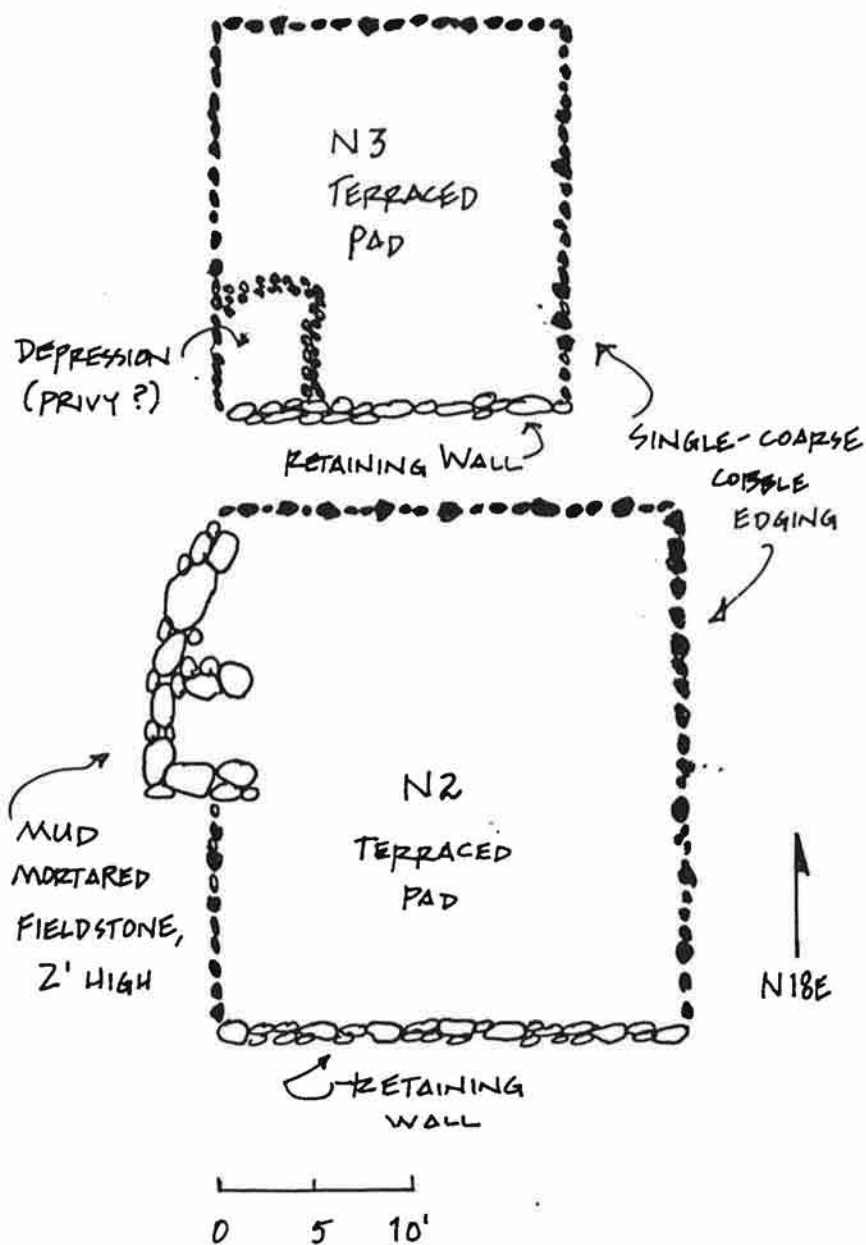


FIGURE 37: N2 and N3 complex at CA-KER-4447H, Wegmen complex.

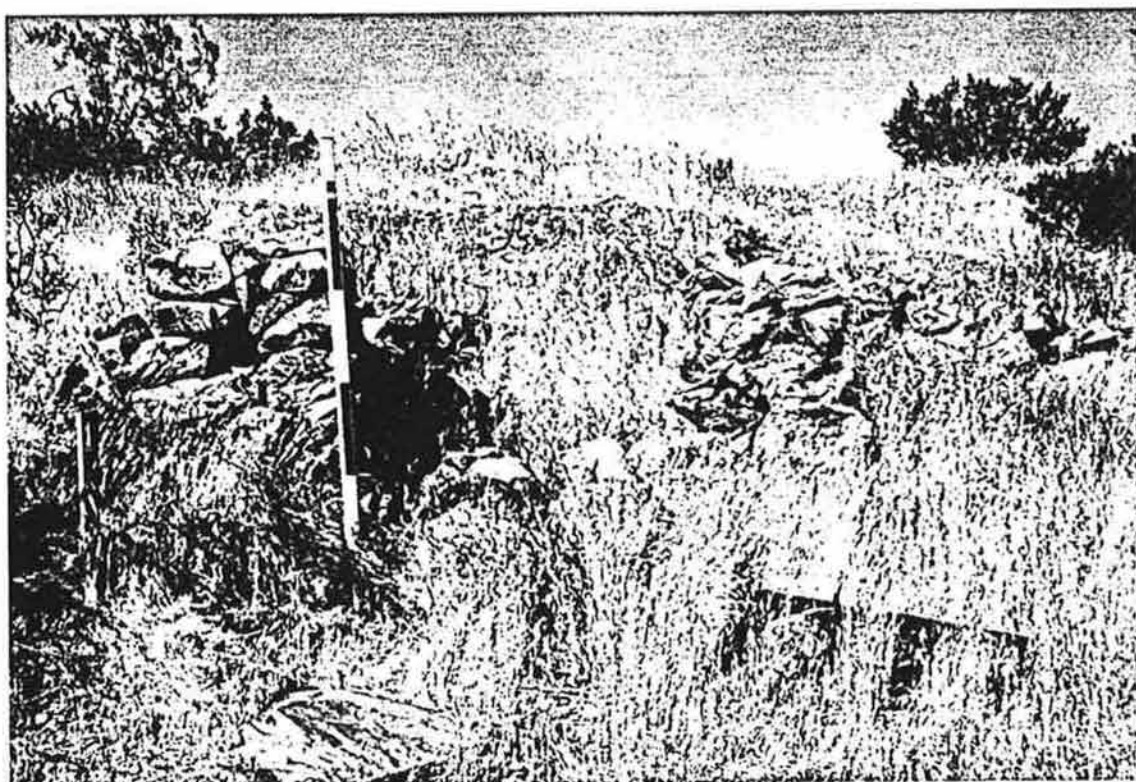
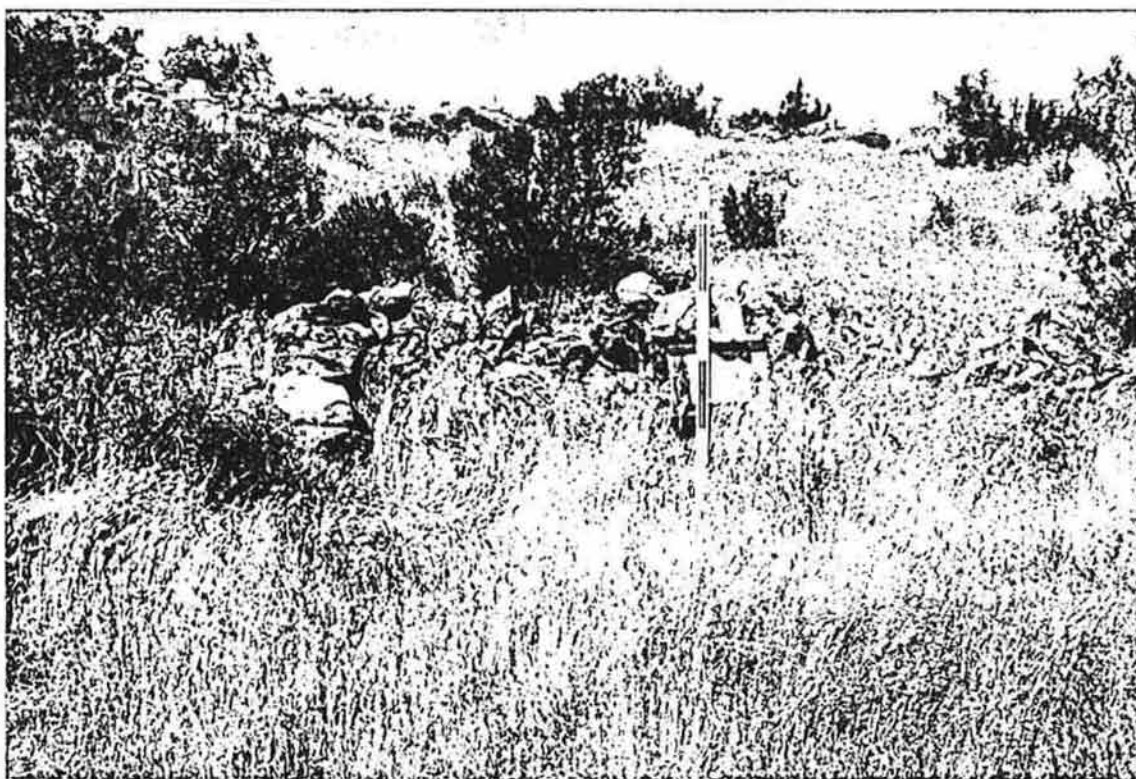


FIGURE 38: N2 and N5 at CA-KER-4447H, Wegmen complex. Top - N2 walls from E; Bottom - N5 from E.

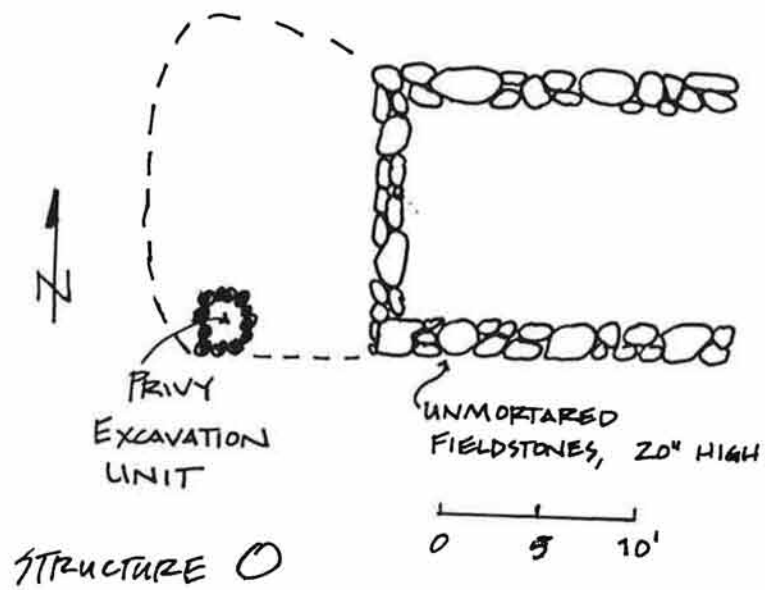
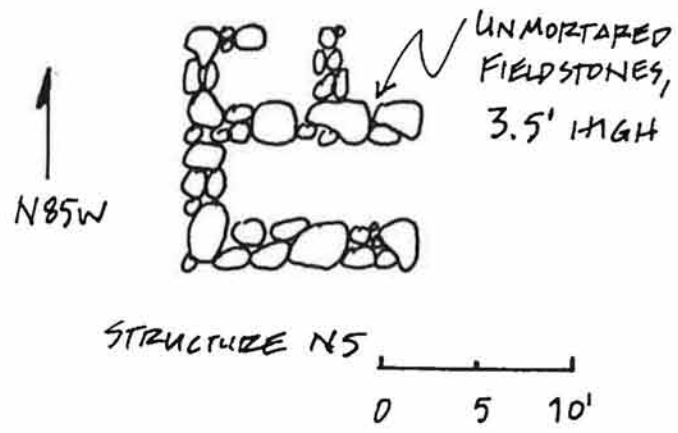
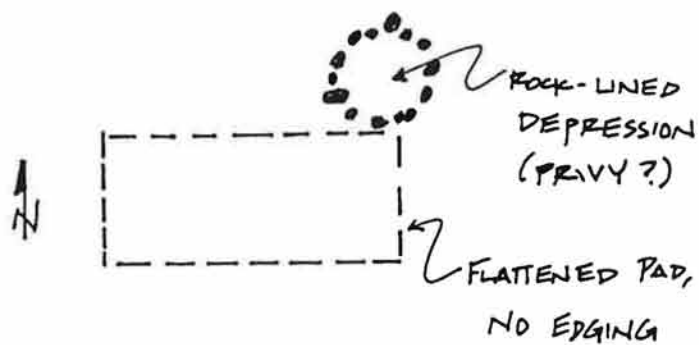
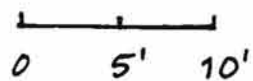


FIGURE 39: Structures N5 and O at CA-KER-4447H, Wegmen complex.



STRUCTURE X11



STRUCTURE P

FIGURE 40: Structures P and X11 at CA-KER-4447H, Wegmen complex.

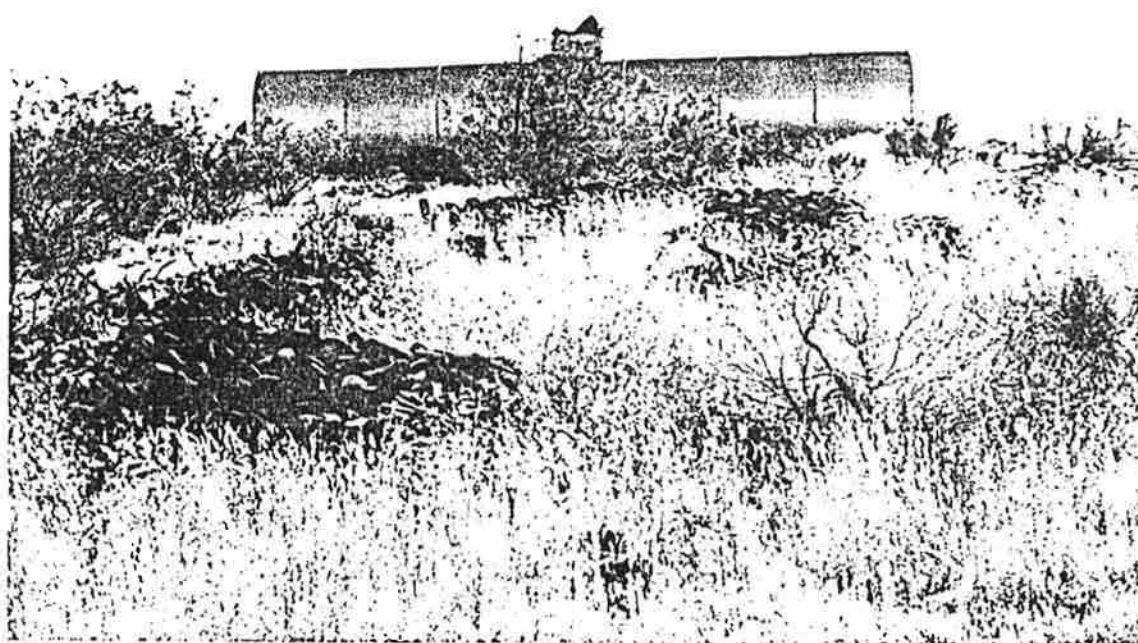


FIGURE 41: Dump F at CA-KER-4447H, Wegmen complex, in foreground; note old RR used as water tank in background.

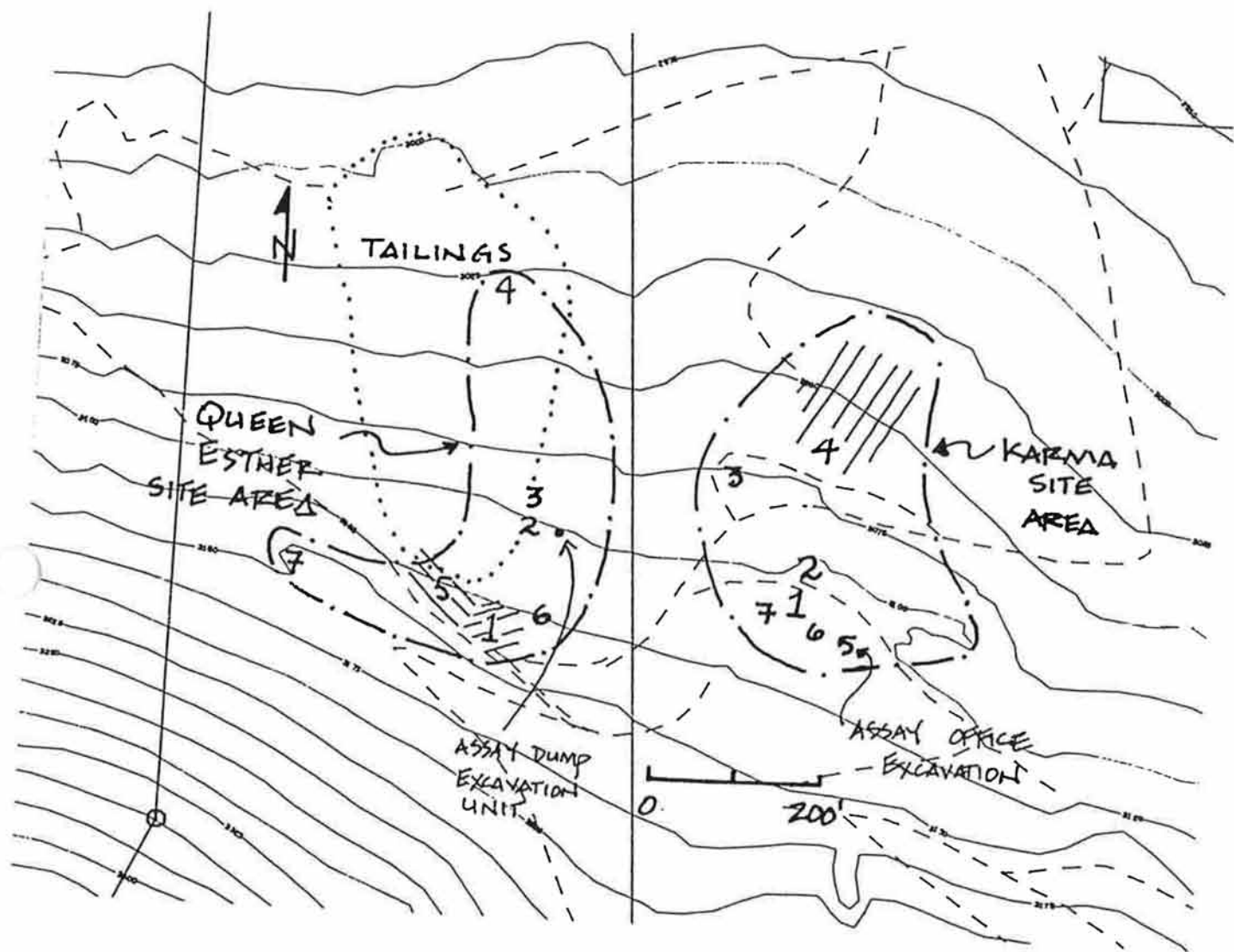


FIGURE 42: Map of the Karma and Queen Esther sites (key - see Table 3).

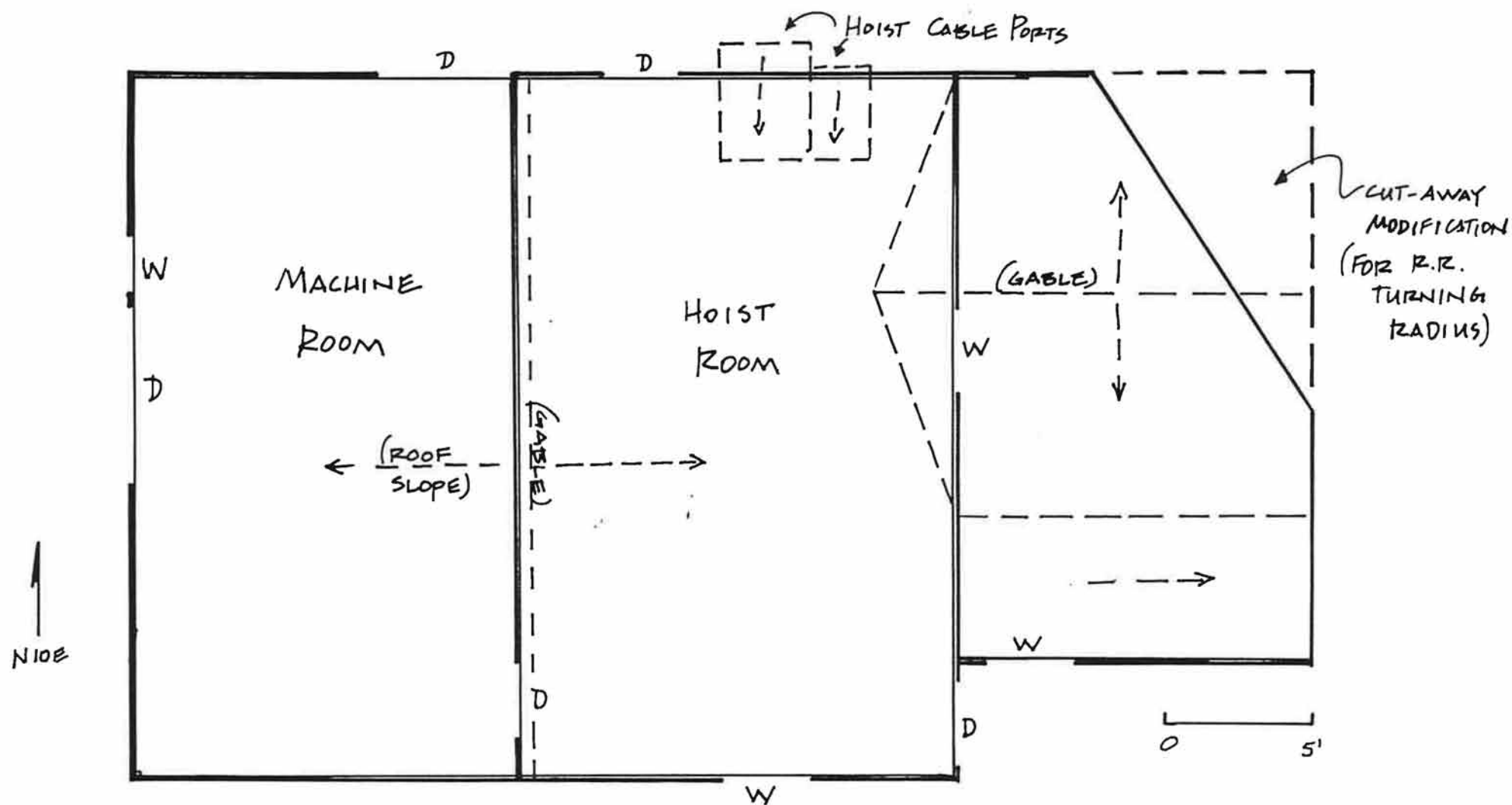


FIGURE 43: Plan of Hoist house at the Karma site, CA-KER-4448H.

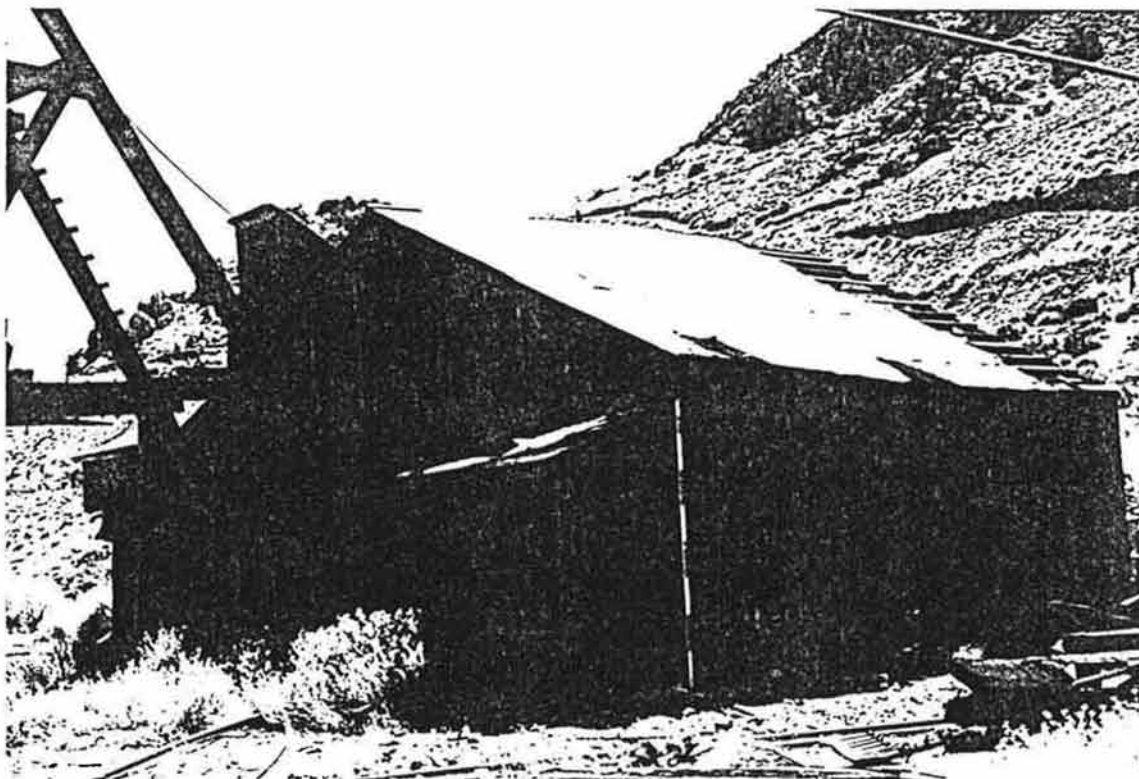


FIGURE 44: Hoist house at Karma site. Top - from NW, note head fram abuttment; Bottom - from NE, note truncated corner.

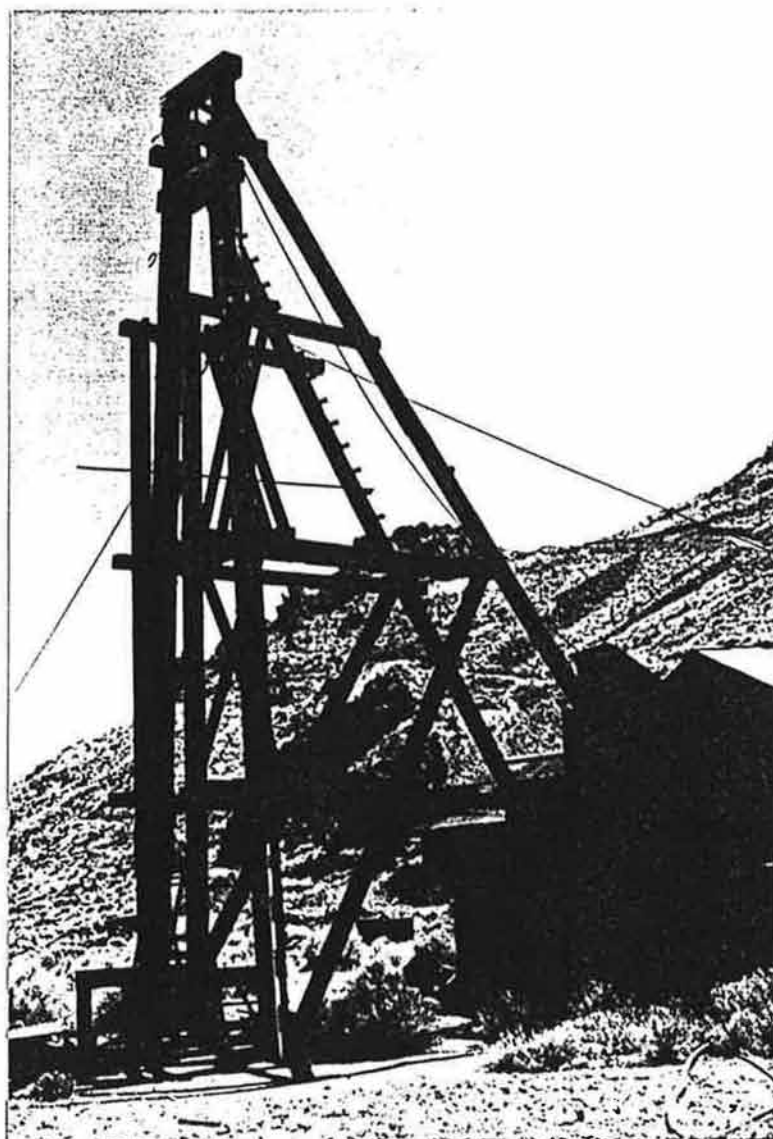


FIGURE 45: Karma head frame.

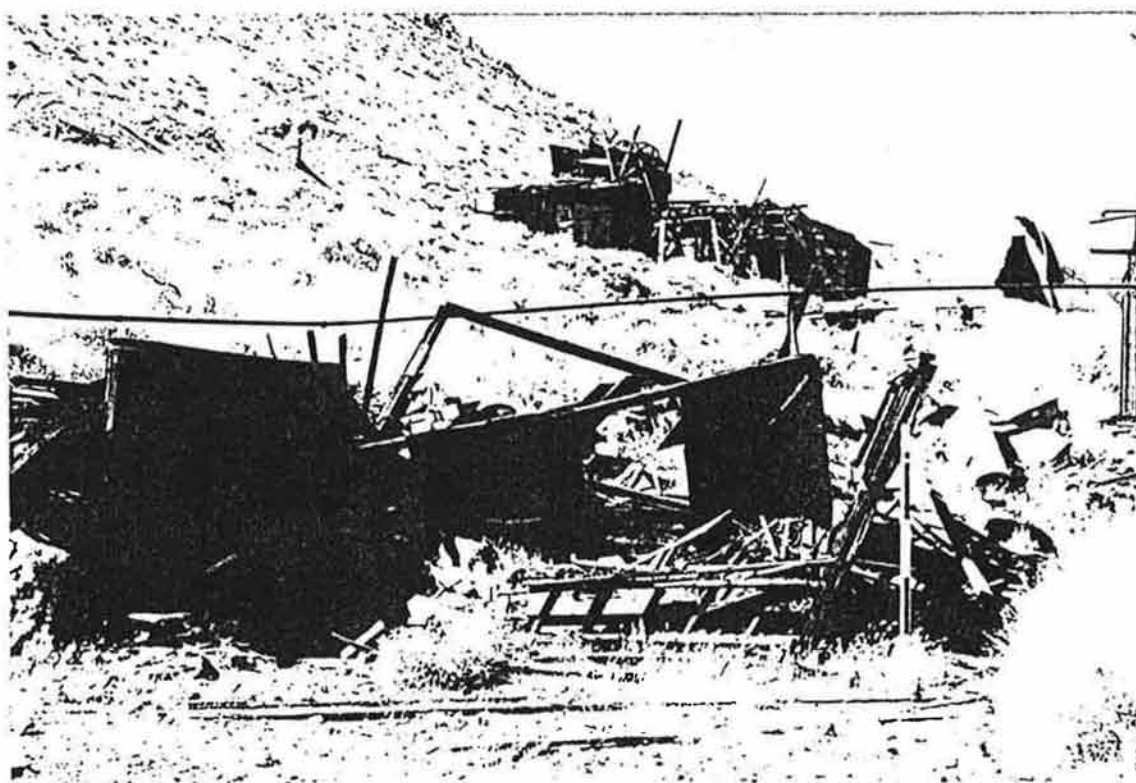


FIGURE 46: Karma site. Top - blacksmith shop from E; Bottom - lower assay dump.

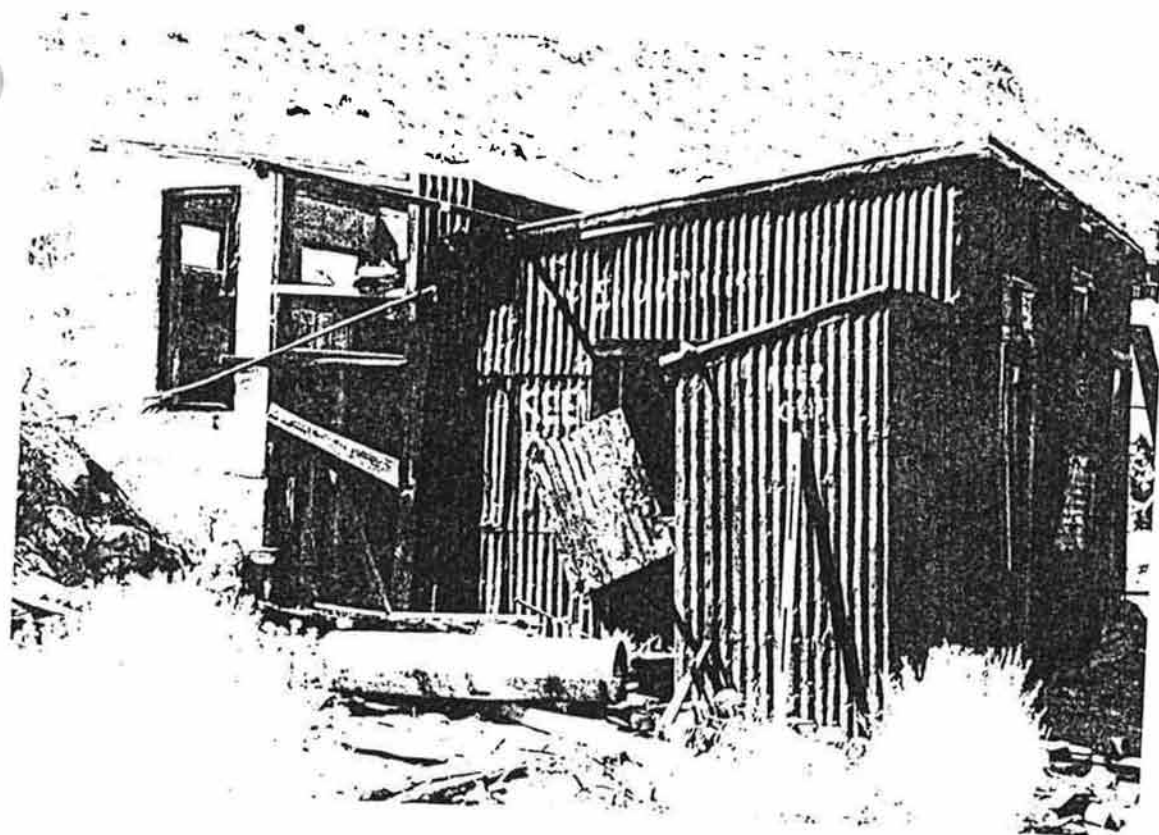
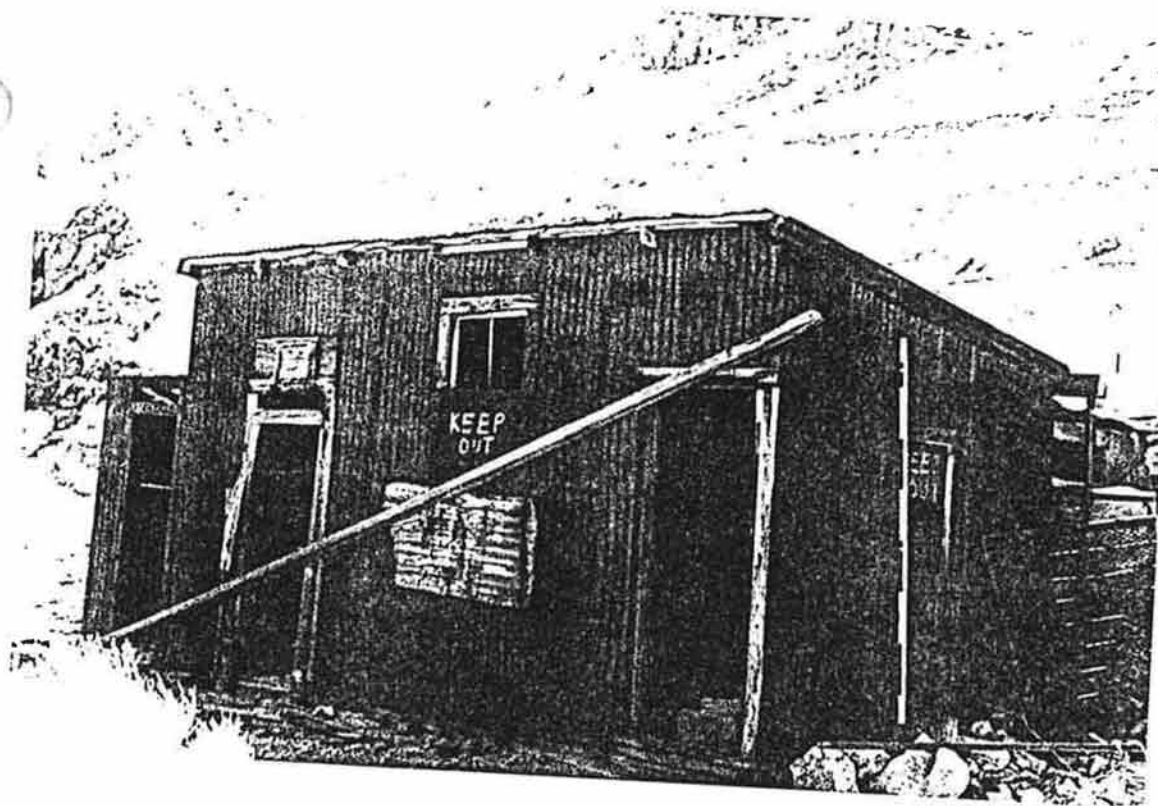


FIGURE 47: Karma site. Top - Upper assay office building from NW;
Bottom - same from NE.

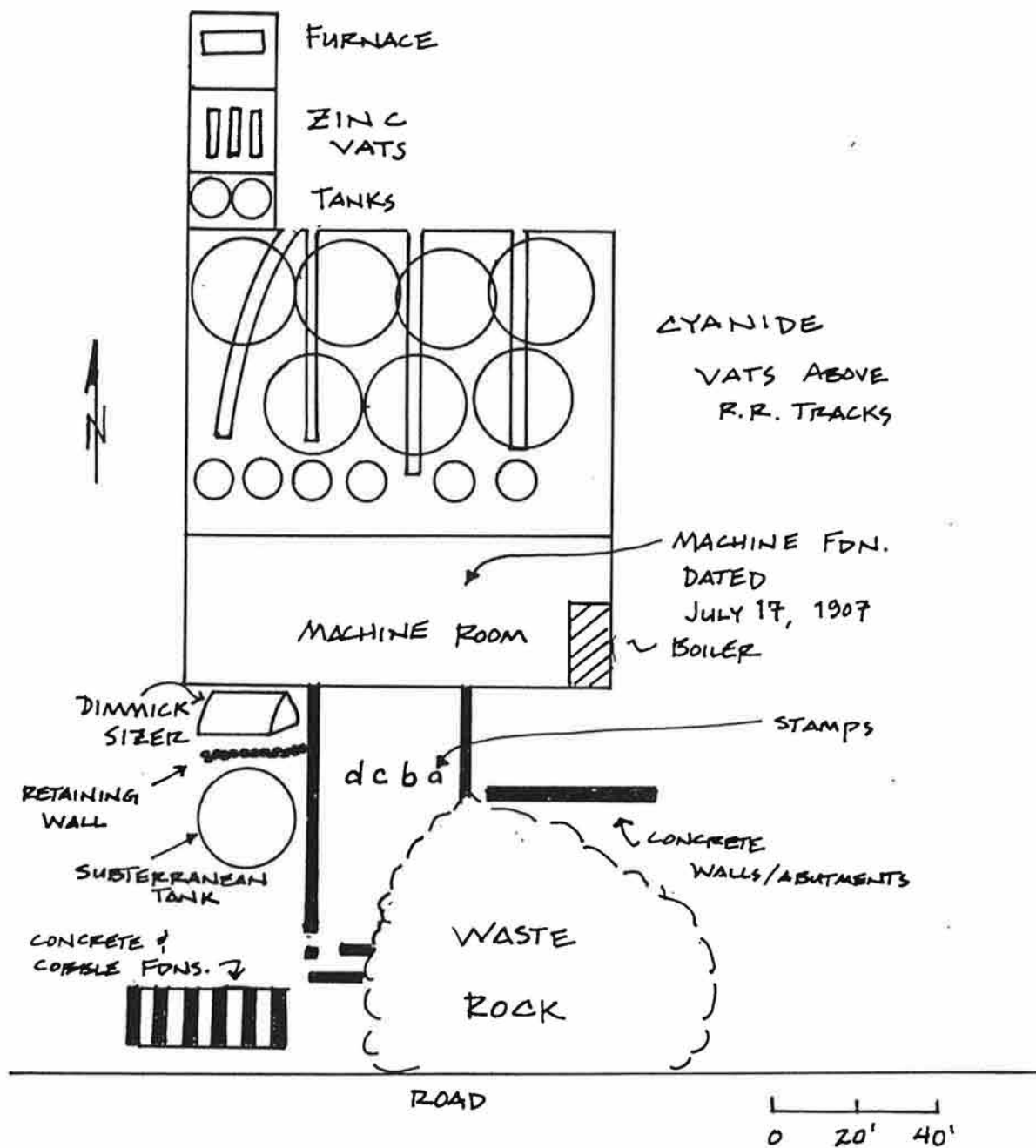


FIGURE 48 - Karma site, plan of extant mill foundations. a - d = stamps and batterries.



FIGURE 49: Karma mill, from S. Top - upper mill levels showing stamps;
Bottom - lower cyanide tank area showing barrel hoops.

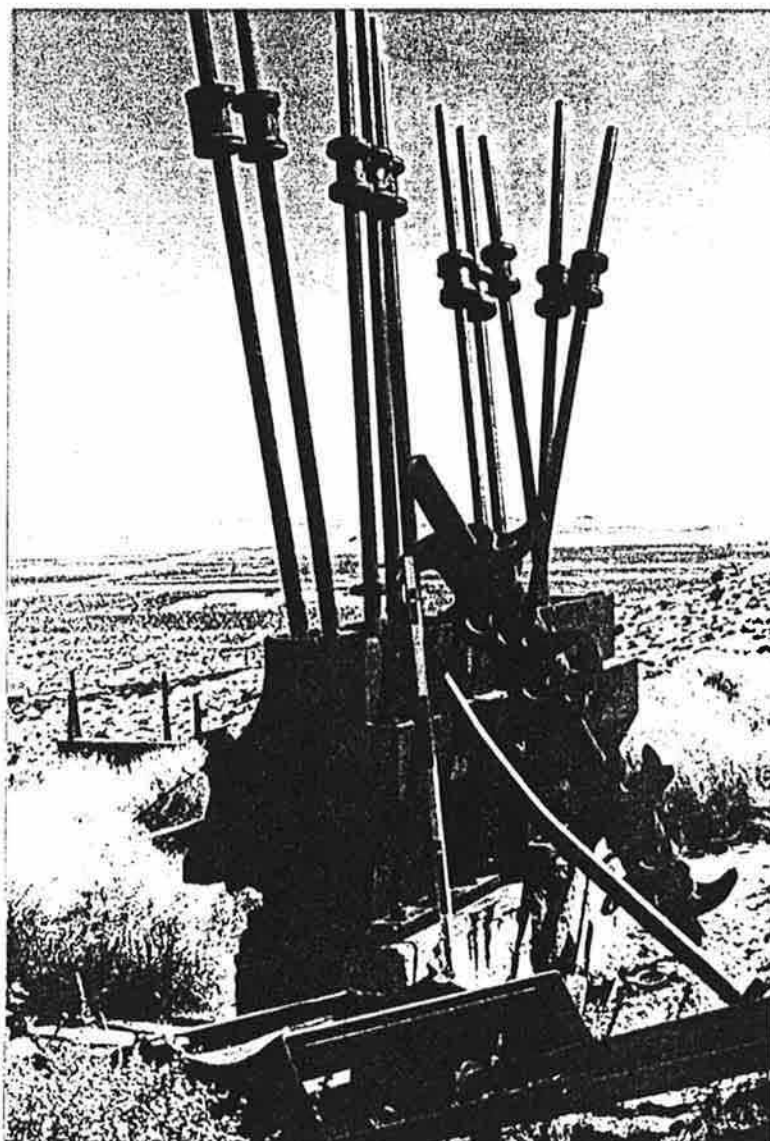


FIGURE 50: Karma Mill, standing stamps and battery, showing fallen rear mounted cam.

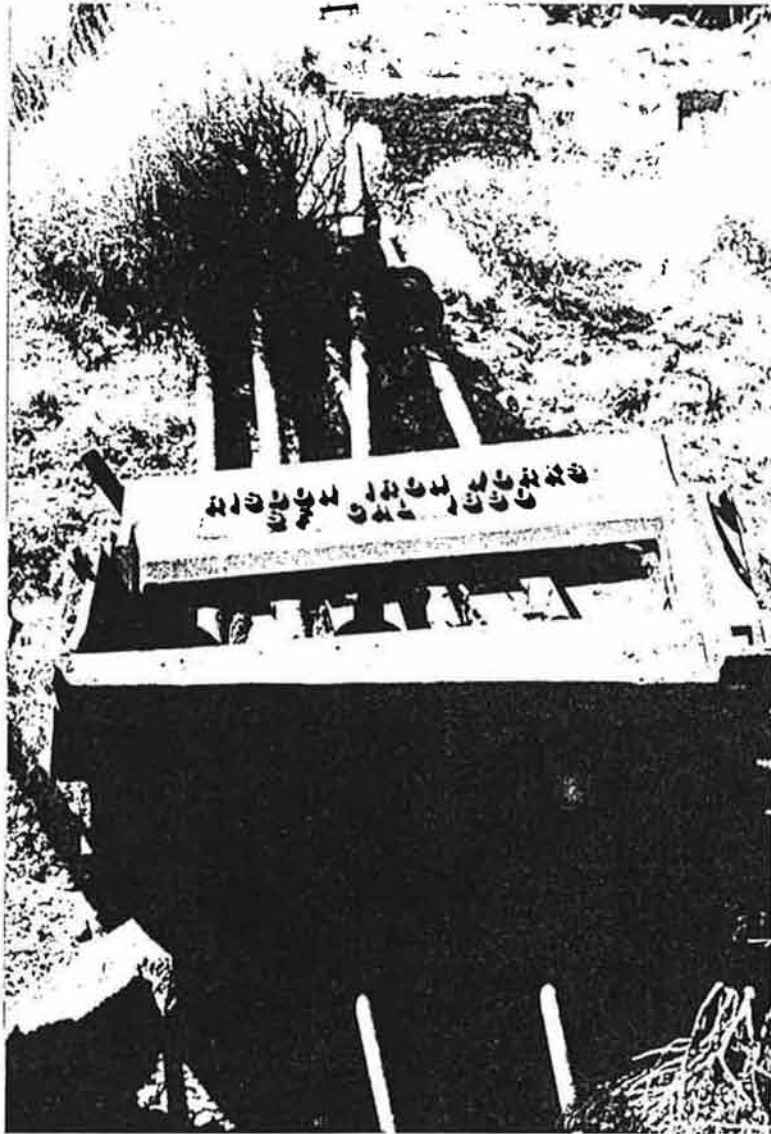


FIGURE 51: Karma Mill, fallen stamps showing Risdon Iron Works mark and 1890 date.

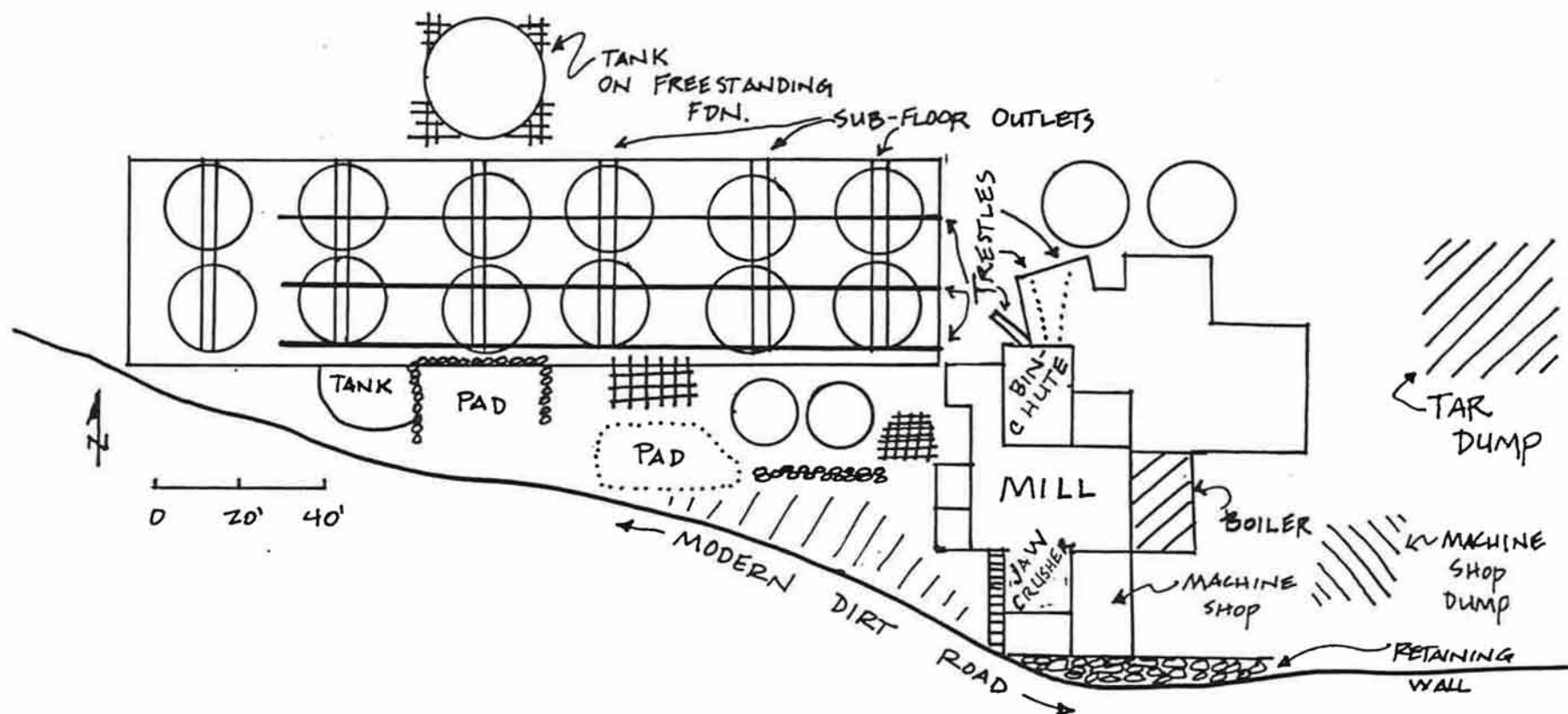


FIGURE 52: Plan of the extant remains of the Queen Esther Mill, CA-KER-4449H.

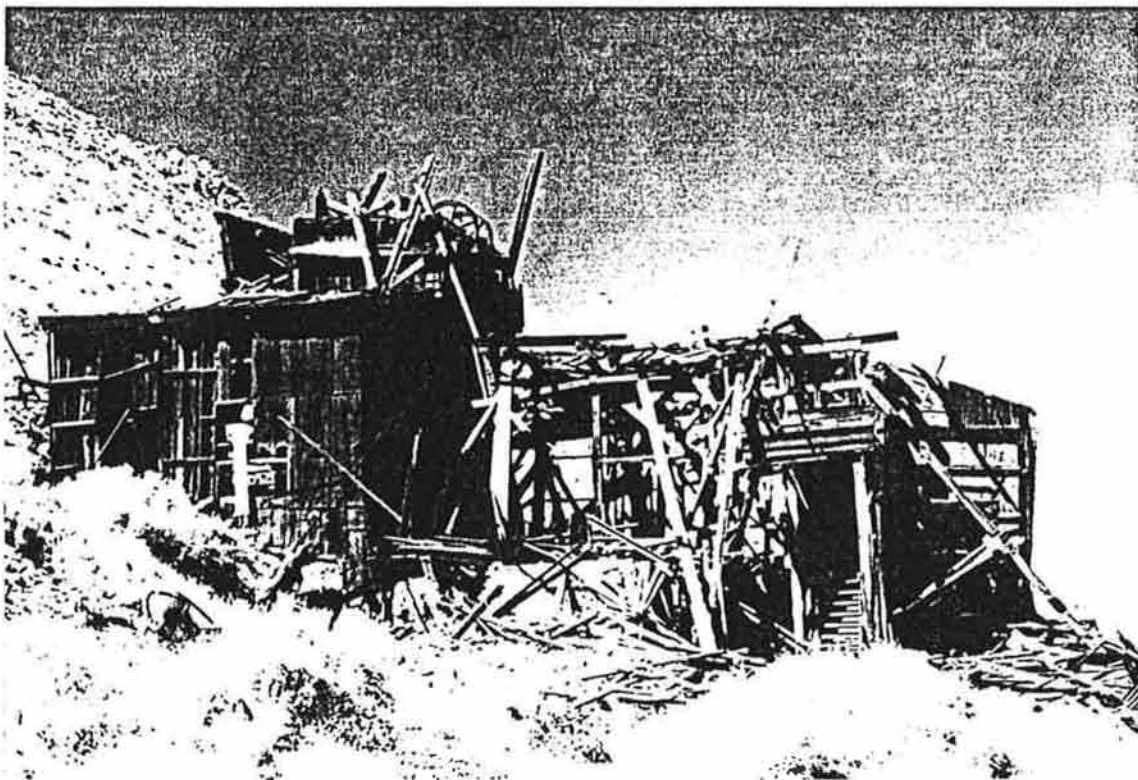
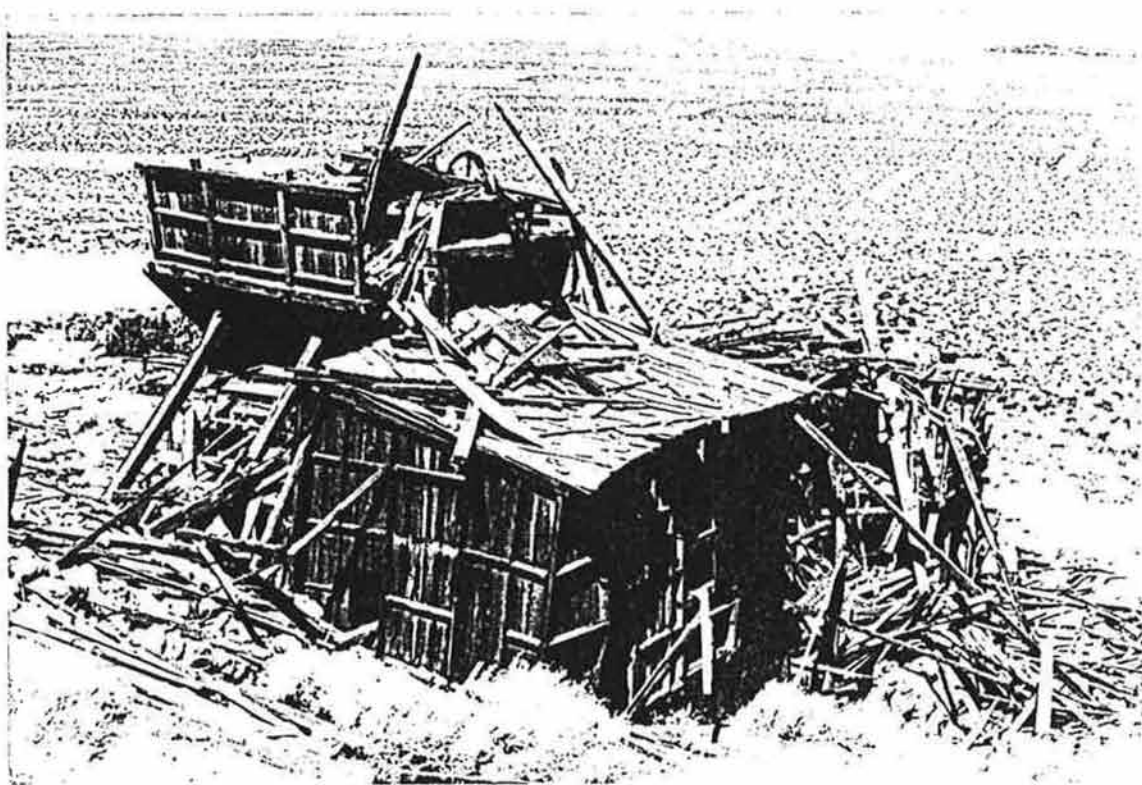


FIGURE 53: Queen Esther mill structure. Top - from SE, with jaw crusher visible at top level; Bottom - from E.

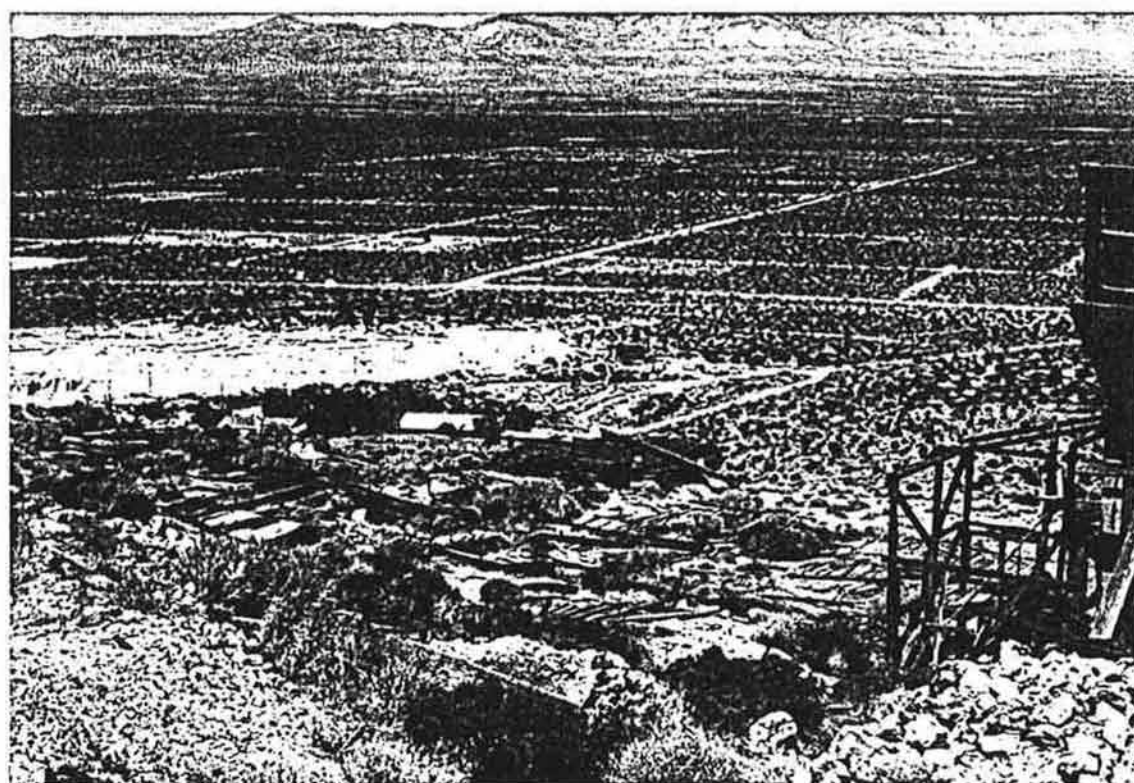
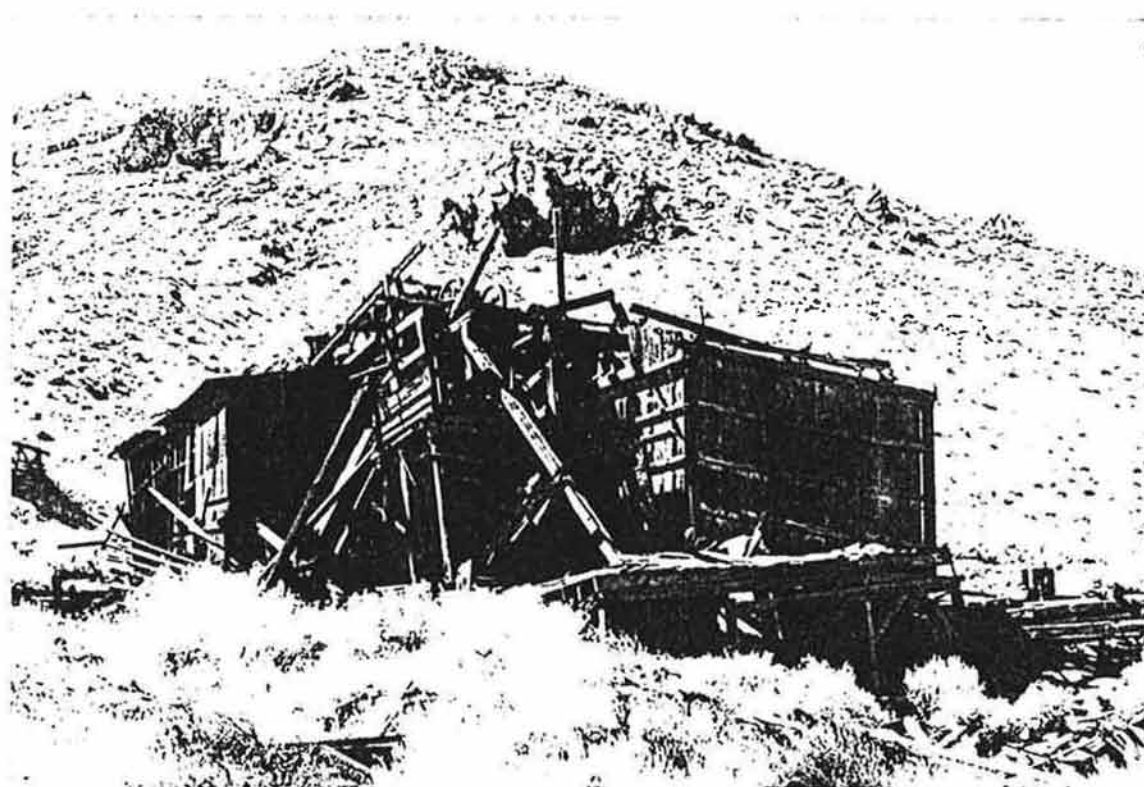


FIGURE 54: Queen Esther Mill. Top - mill structure from NE; Bottom - remnants of Tank Building, from SE.

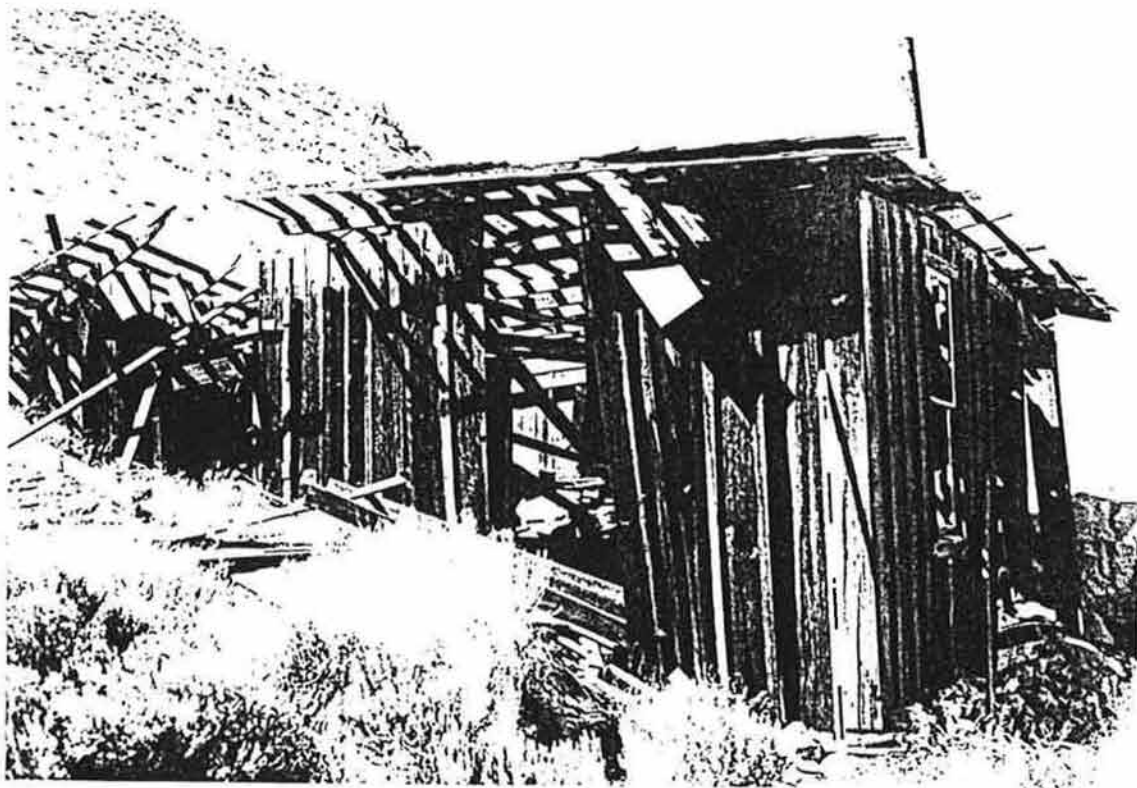


FIGURE 55: Queen Esther. Top - collapsing assay office from NE; Bottom - cobble structure and tar barrel in asphalt dump area, from SW. Note Karma head frame in background.



FIGURE 56: Map of Echo Mill site (key - see Table 4).

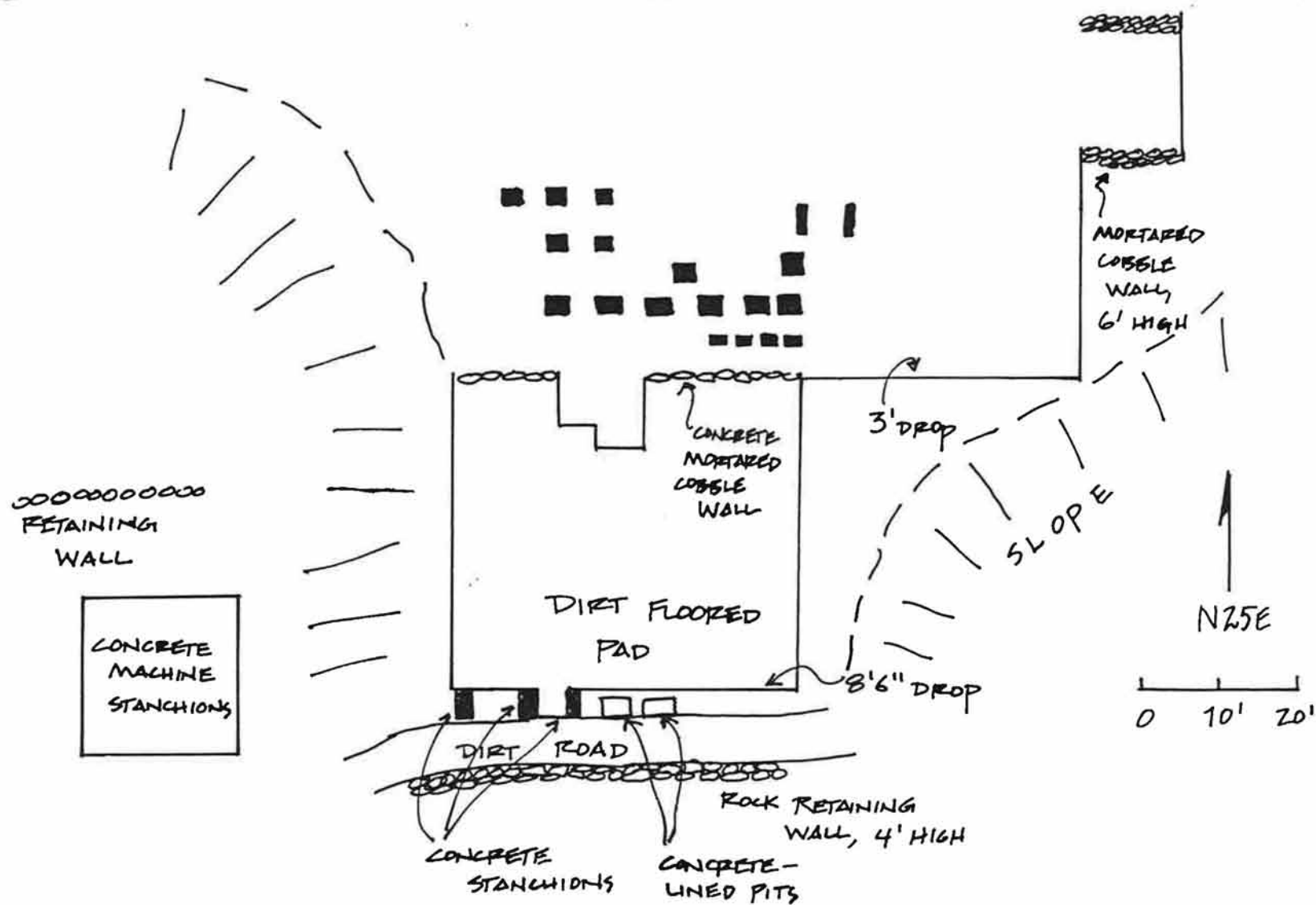


FIGURE 57: Plan of the extant remains of the Echo Mill, CA-KER-4450H.

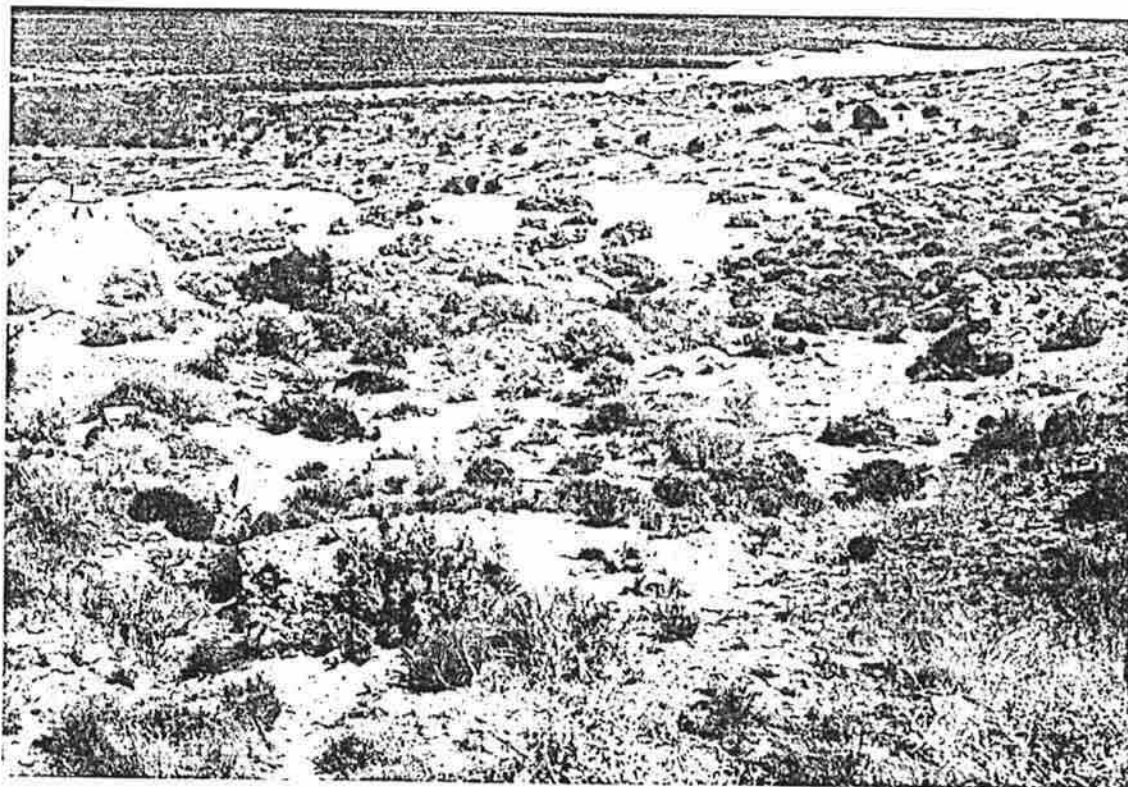


FIGURE 58: Echo Mill. Top - main mill area with terraced pad and machine stanchions; Bottom - "boiler room" wall, N E side of mill.

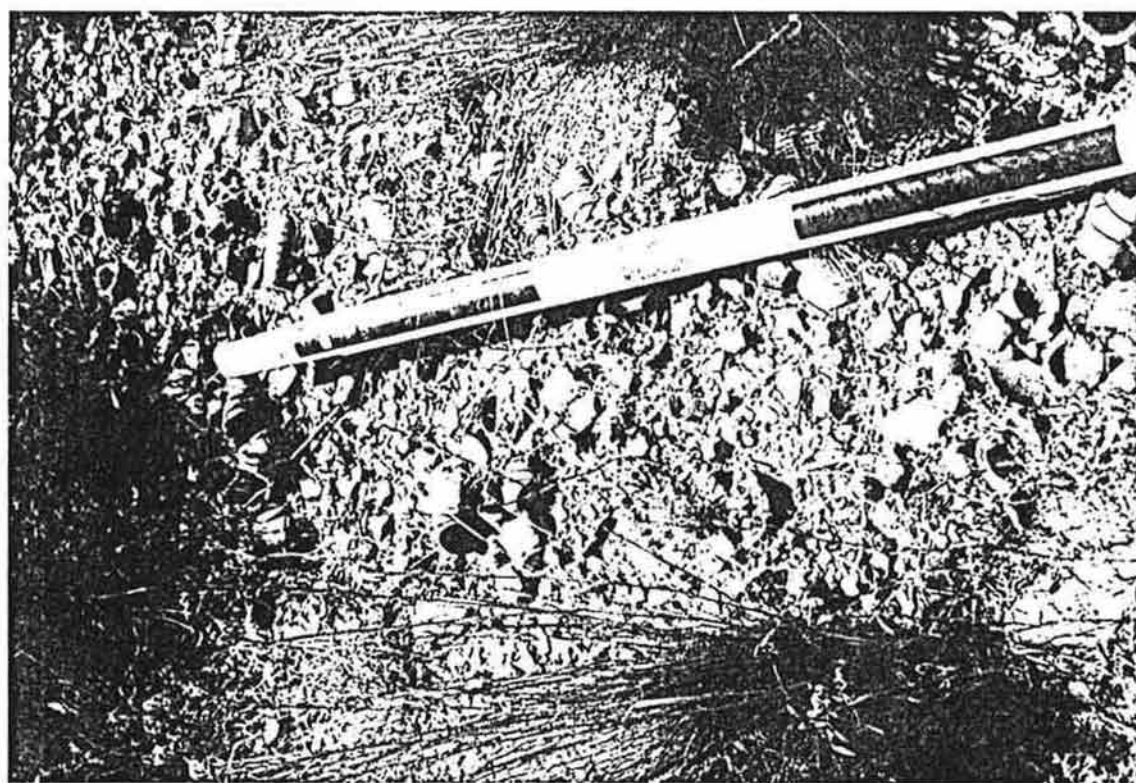
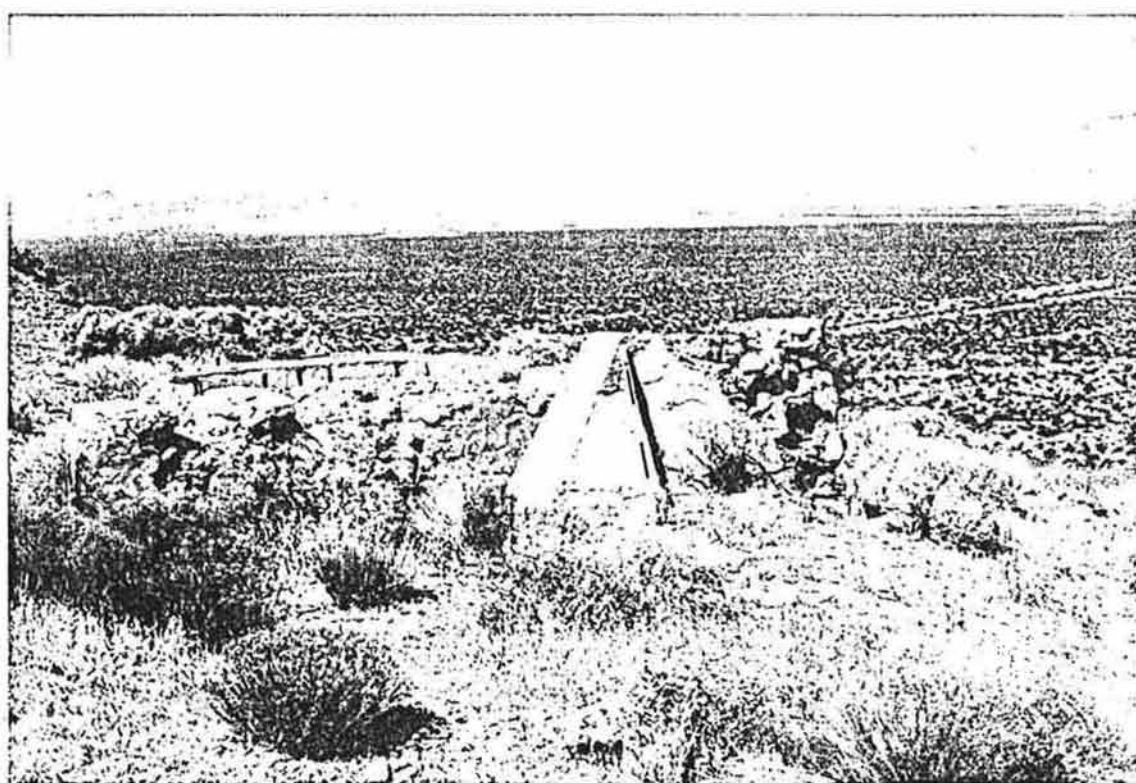


FIGURE 59: Echo Mill. Upper - upper machine stanchion area; Bottom - assay dump.

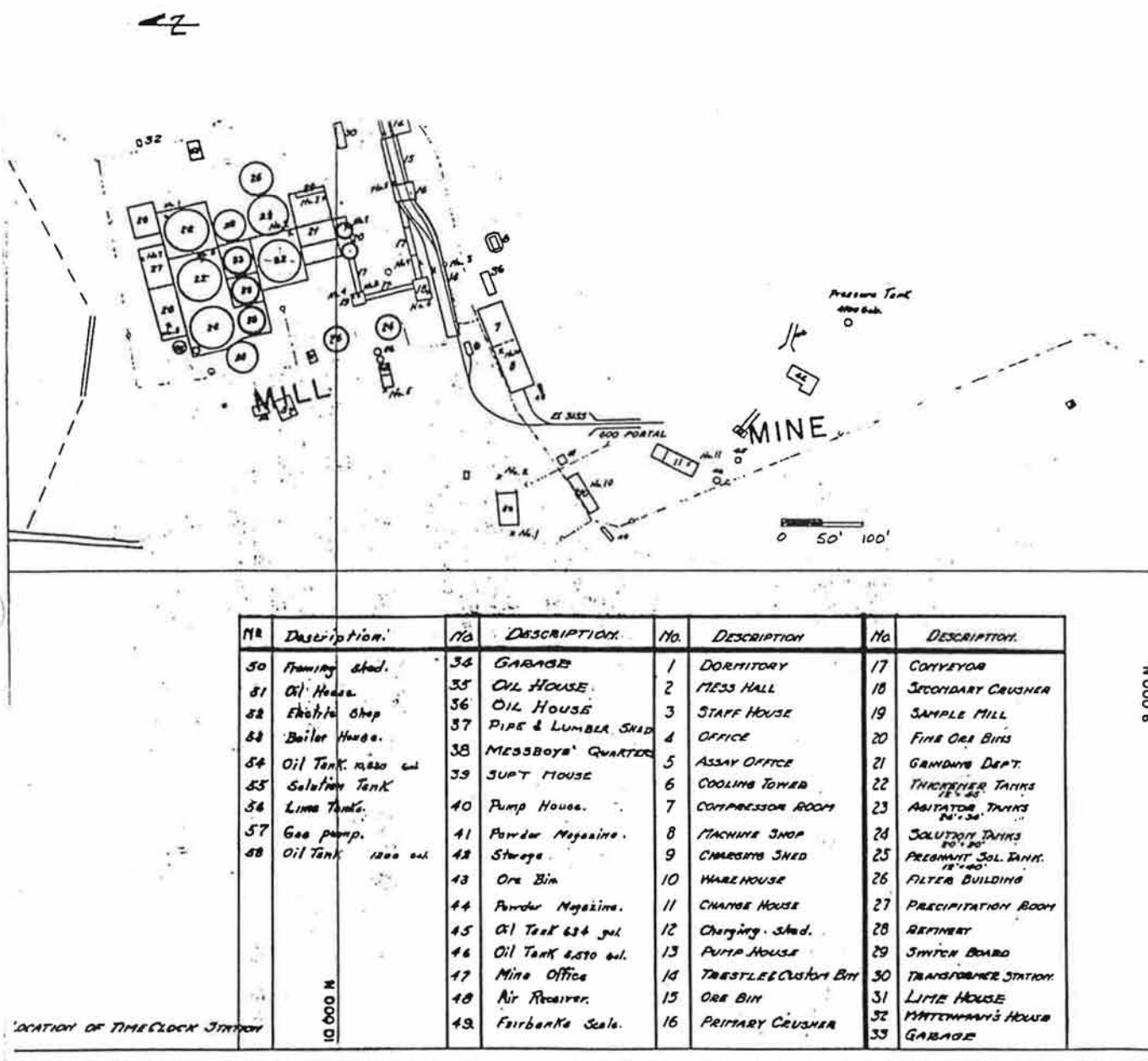


FIGURE 60: Original plan for the 1935 Golden Queen Mill.

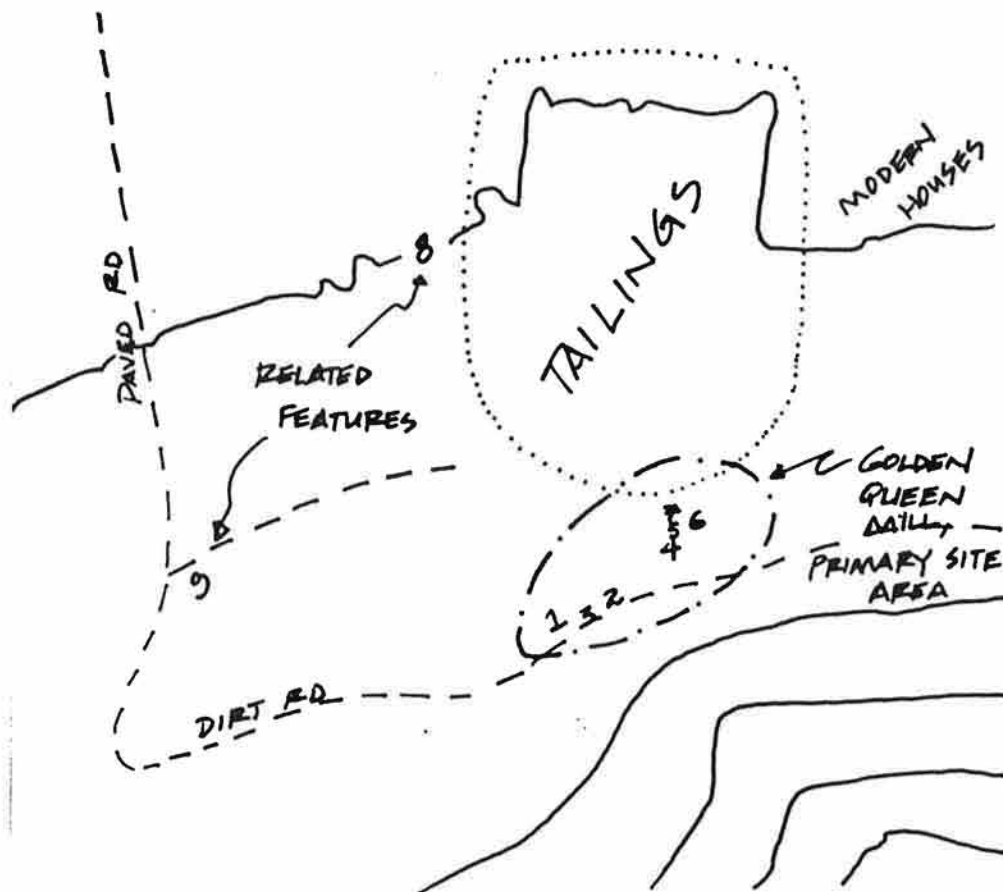


FIGURE 61: Archaeological map of Golden Queen Mill remains (key - see Table 4; scale - 1 : 400).

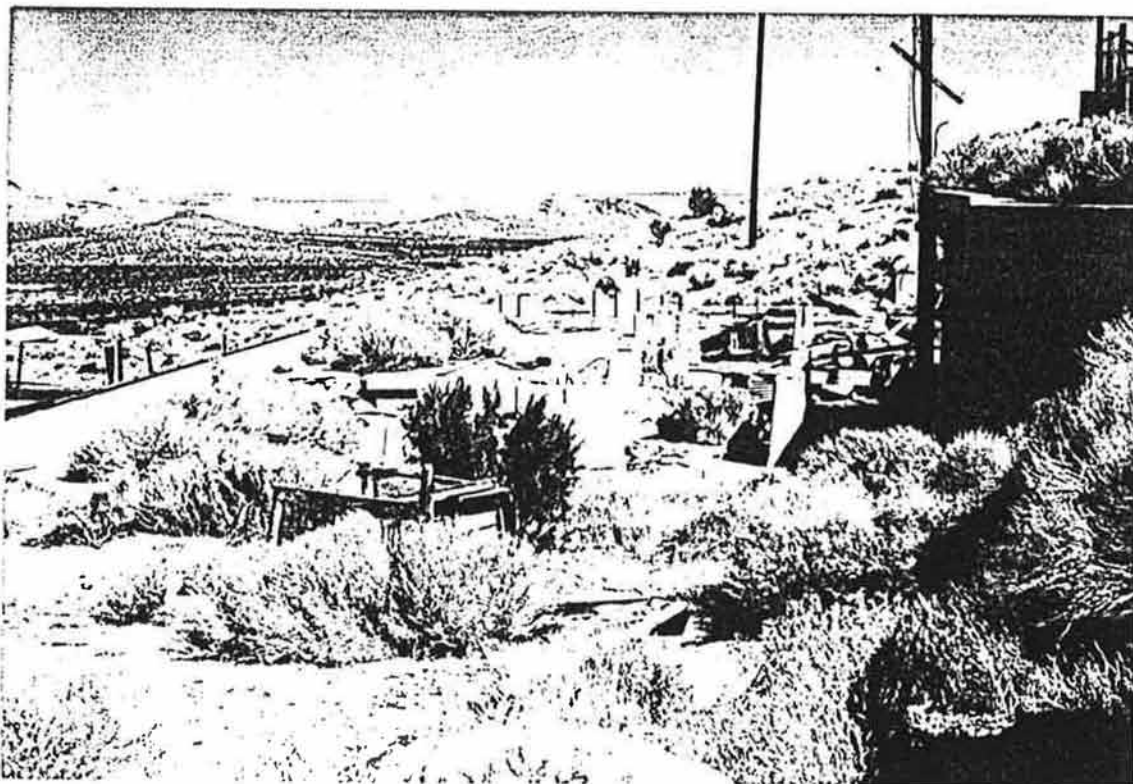


FIGURE 62: Golden Queen Mill remains. Top - concrete ore chutes, with primary crusher area to right (note burnt timbers and ash), from W; Bottom - ball mill area, from SW.

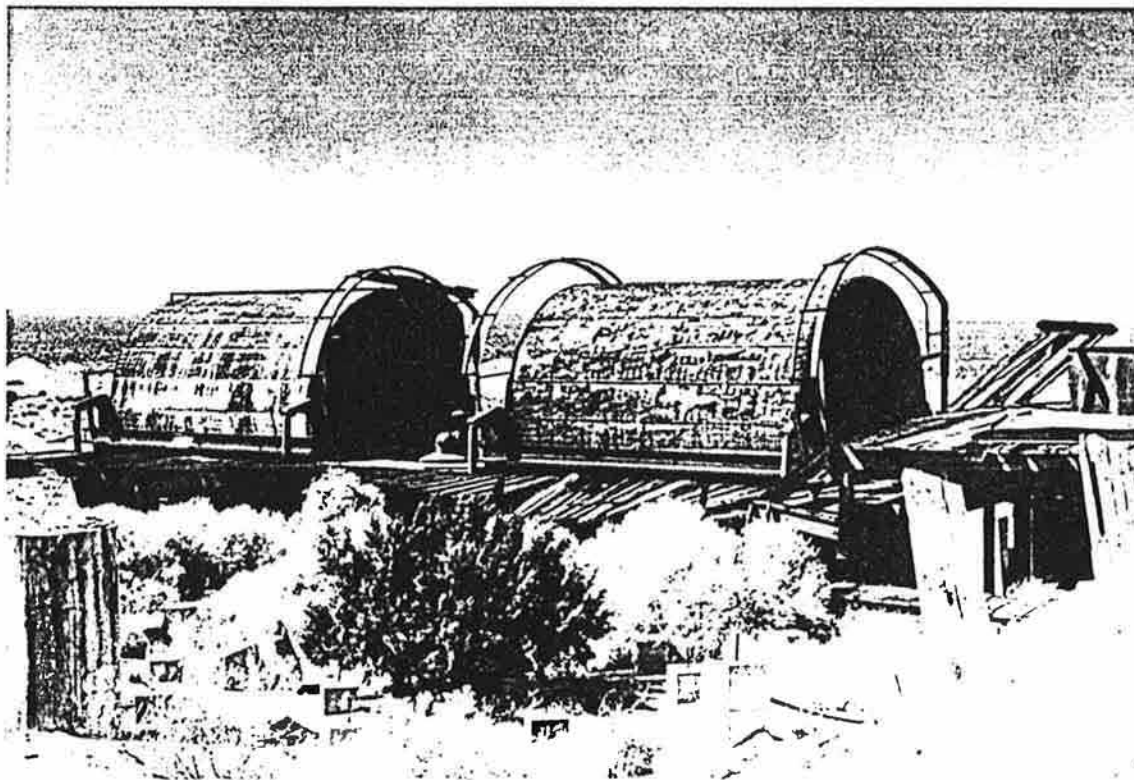


FIGURE 63: Golden Queen Mill. Top - ball mill area, foreground, and Dorr agitator tanks, from primary crushing area (i.e., SW); Bottom - Oliver drum filters from SE.

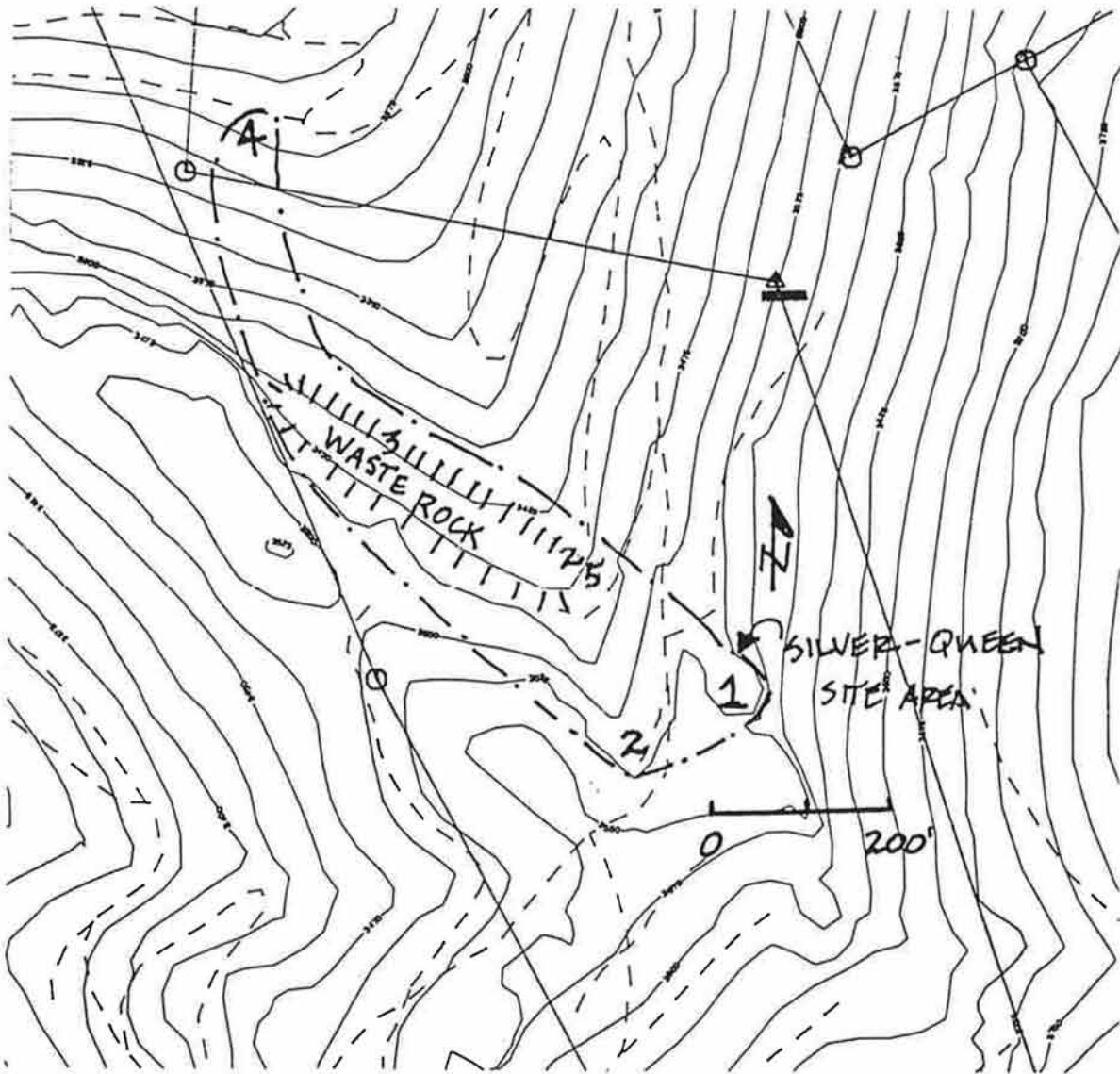


FIGURE 64: Map of Silver Queen features (key - see Table 4).

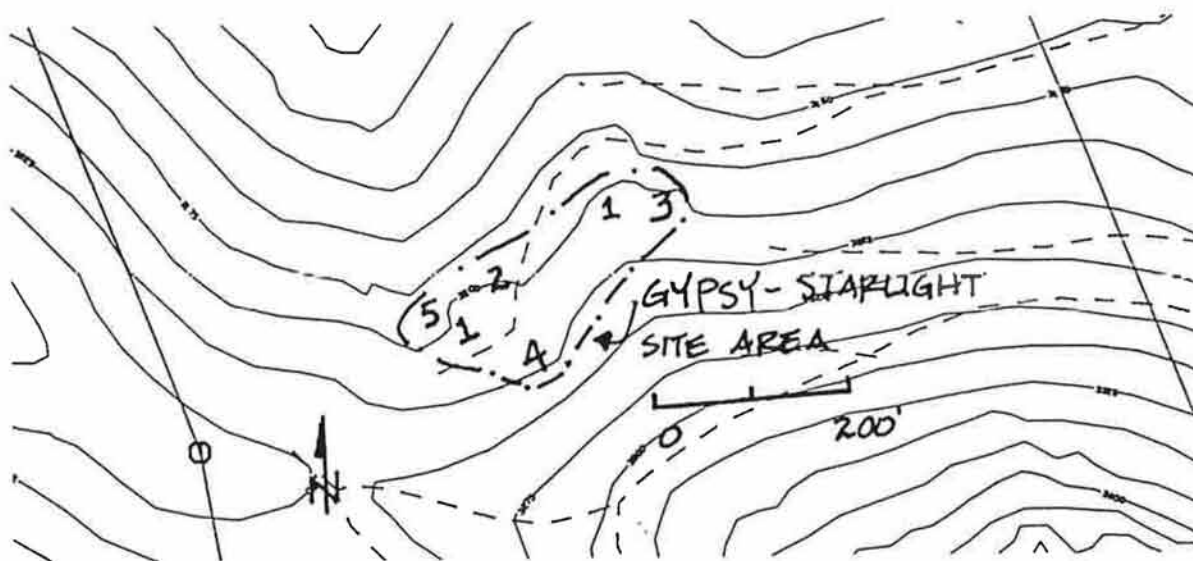


FIGURE 65: Map of Gypsy Starlight features (key - see Table 4).



FIGURE 66: Gypsy Starlight. Top - view from SW showing abandoned sizer and waste rock dump trestle; Bottom - upper (W) collapsed truck ore chute.

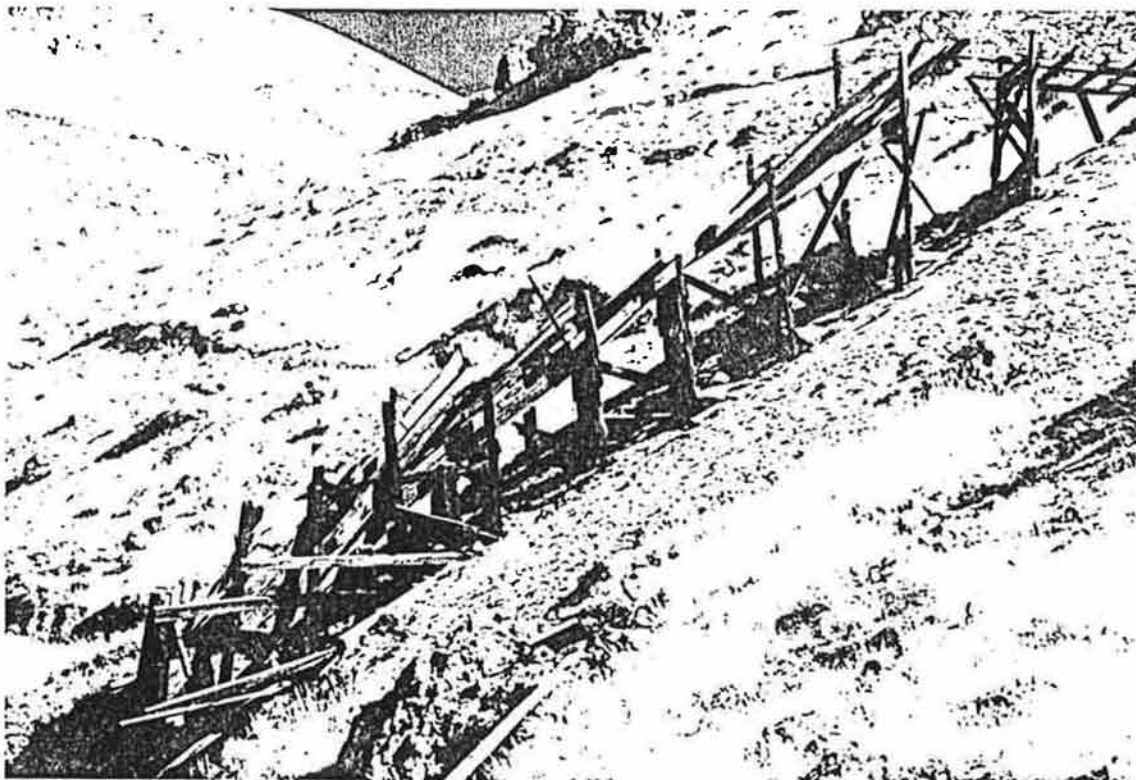
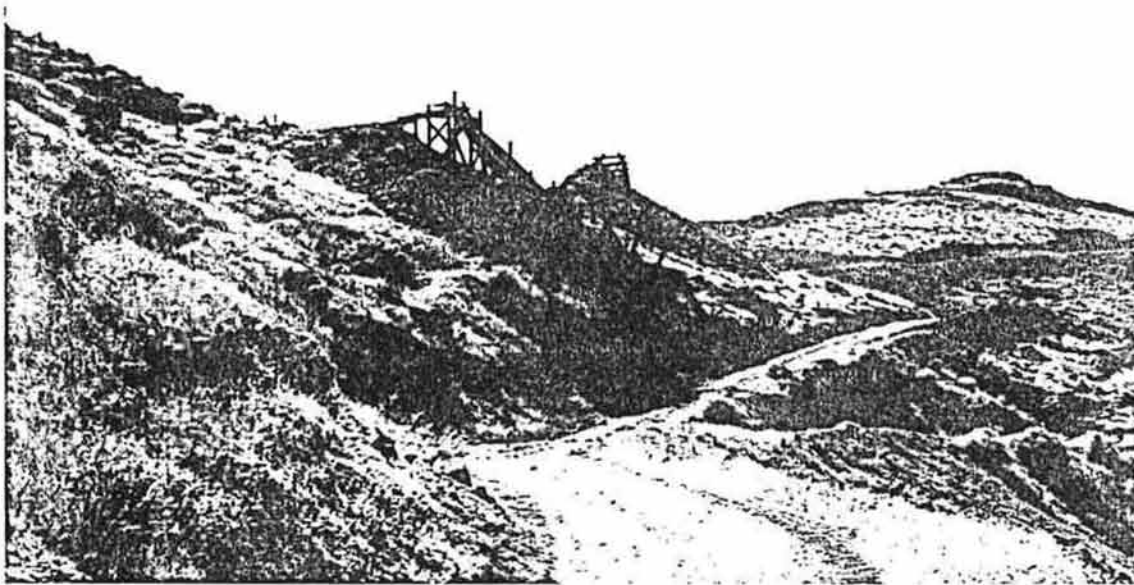


FIGURE 67: Gypsy Starlight. Top - lower (E) truck ore chute, with waste rock dump trestle in background, from E; Bottom - lower (E) truck ore chute, from W, showing collapsing status of feature.

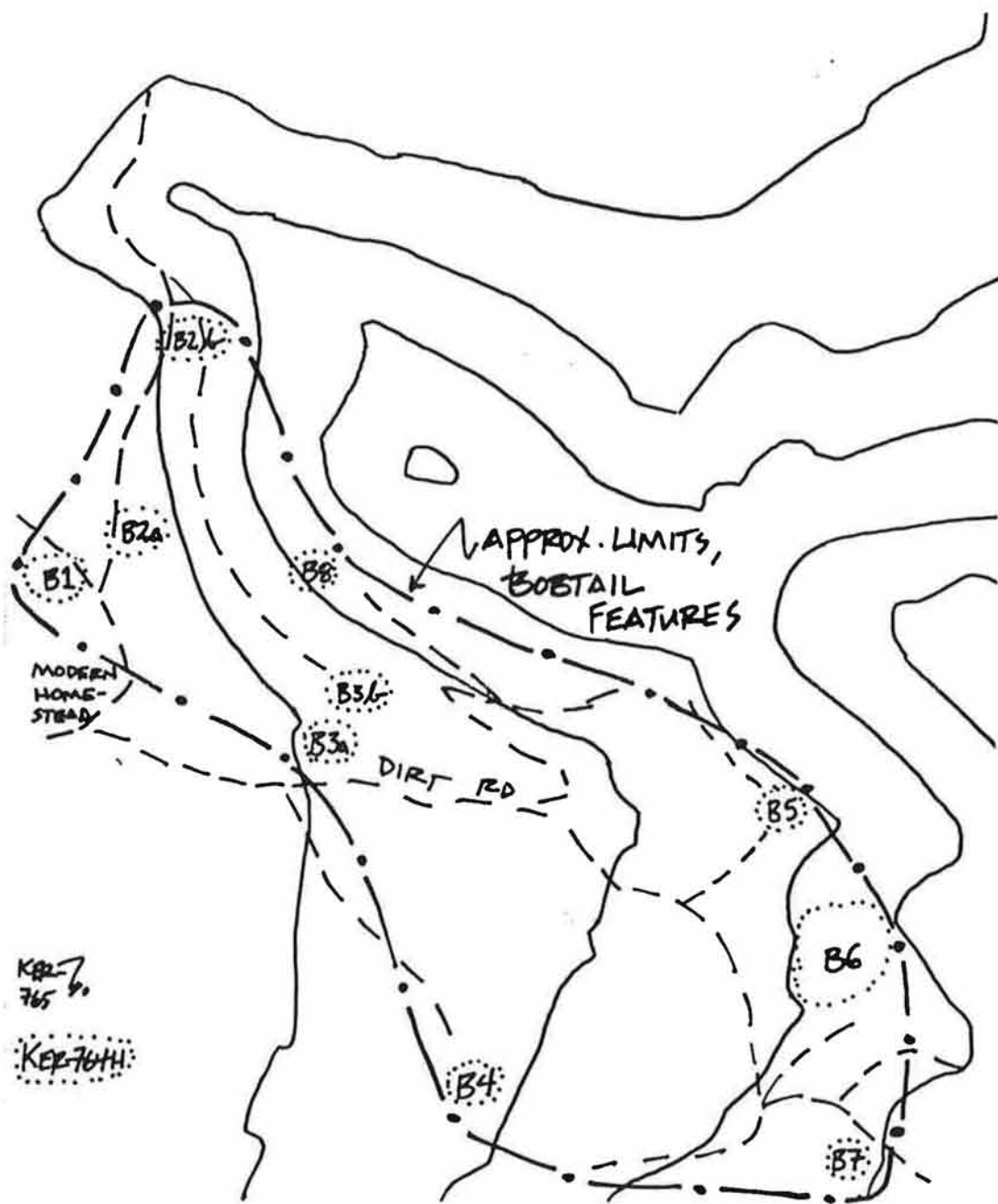


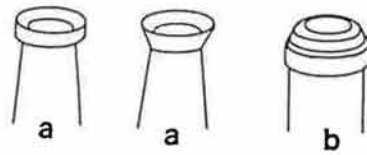
FIGURE 68: Map of Bobtail, showing location of Features B4, B5, B6 and B7, which are located within the study area (key - see Table 4; scale - 1 : 400).



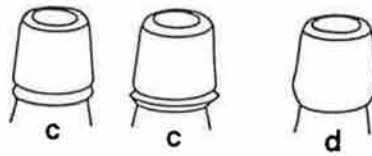
Not to scale

- | | | | |
|---------------------|------------------------|----------------------------|---------------------------|
| a. Beer | k. Fluted prescription | u. Plain oval | ee. Square ring |
| b. Champagne | l. Pomade morphine | v. Vial | peppersauce |
| c. Case | m. Panel | w. Oval castor oil | ff. French barrel mustard |
| d. Jo Jo flask | n. Ball neck panel | x. Club sauce | gg. Round horseradish |
| e. Shootly flask | o. Baltimore oval | y. Olive oil | hh. Florida water |
| f. Union oval flask | p. Union oval | z. Olive bottle | ii. Oval polish |
| g. Picnic flask | q. Philadelphia oval | aa. Eclipse olive oil | jj. Snuff jar |
| h. Soda water | r. Blake | bb. American square pickle | kk. Carmine ink |
| i. Packing | s. Oblong | cc. Octagonal | ll. Conical ink |
| j. Round | tooth powder | peppersauce-spice | mni. Round ink |
| prescription | i. French square | dd. Gothic peppersauce | nn. Igloo ink |

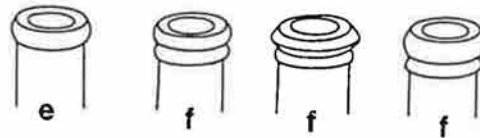
FIGURE 69: Typology of bottle forms, from Herskovitz (1978).



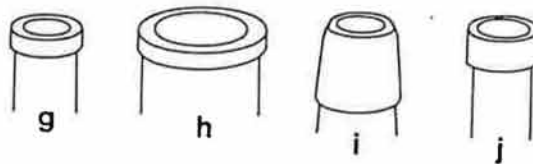
- a. Prescription
- b. Champagne



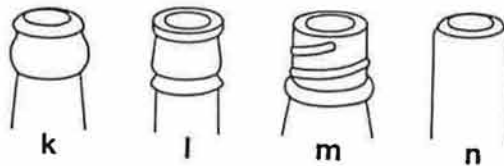
- c. Brandy
- d. Beer



- e. Bead
- f. Double bead



- g. Patent extract
- h. Wide mouth patent extract
- i. Oil
- j. Packing



- k. Crown
- l. Club sauce
- m. Screw
- n. Sheared

FIGURE 70: Typology of neck forms, from Herskovitz (1978).

**CLASS III INVENTORY OF THE GOLDEN QUEEN MINE PROJECT
AREA, MOJAVE, KERN COUNTY, CALIFORNIA**

DRAFT

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October 31, 1995

Management Summary

A Class III Inventory was conducted for the Golden Queen Mine project area on Soledad Mountain, Mojave, Kern County, California. This involved background studies of the prehistory, ethnography and history of the study area and region, including reviews of published and unpublished documents, and interviews with local residents; a complete, intensive survey of the study area; the identification and recording of sites; and limited subsurface probing of the sites in order to determine their eligibility to the National Register of Historic Places (NRHP). Two sites had been recorded within the study area: CA-KER-764H, a historic structure, and -765, a bedrock grinding slick. Two additional sites were recorded: CA-KER-4455H, the Elephant-Eagle Mill and Mine, dating from the Depression; and CA-KER-4454H, a series of unrelated small mining features clustered in the area of the Bobtail claims, dating to different periods. CA-KER-764H was found to comprise a small water control system of unknown age and association. CA-KER-765 was found to be a natural feature and therefore not a cultural resource. CA-KER-4455H, with no standing structures or intact archaeological deposits, was found to lack integrity. Similarly, the features at CA-KER-4454H lacked integrity. These four sites, accordingly, were found to not be significant and therefore to be ineligible to the NRHP. Furthermore, the proposed project was therefore determined to have no effect on significant cultural resources.

Acknowledgements

We are indebted to David Weiss and John Dowis for their assistance on this project. We also greatly thank Larry Vredenburg for sharing his files and knowledge on local mining history, and Mrs. Ginny (Wegmen) Meehl for her personal reminiscences about growing up on Soledad Mountain. Finally, we thank our crew, Bob Rechtman, Tamy Whitley, Jeff Armstrong, Wendy Armstrong, Paul Vignolle, Mike Hakim, Rob Snibley and Jim Lang for their field efforts.

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CLASS III INVENTORY OF THE GOLDEN QUEEN PROJECT AREA, MOJAVE, KERN COUNTY, CALIFORNIA

1.0

INTRODUCTION

At the request of Mr. John Dowis, Golden Queen Mining Company, Rosamond, California, a Class III archaeological inventory was conducted for the Golden Queen project area, Kern County, CA. The inventory of this study area was conducted by W & S Consultants, Simi Valley, CA, under Bureau of Land Management archaeological permit CA9401002 (1994) with fieldwork authorized on March 23, 1995, by Dan Fowler, Ridgecrest Resource Area Office. David S. Whitley, Ph.D., served as principal investigator for this study; he was assisted by Joseph M. Simon, Robert B. Rechtman, Ph.D., and Tamara K. Whitley, M.A., during aspects of the fieldwork, archival investigations and analytical studies. D.S. Whitley is responsible for the authorship of this report.

The Golden Queen project study area is located on Soledad Mountain, near Mojave in the southwestern portion of Kern County, primarily within Section 6, Township 10 North, Range 12 West (Figure 1). It includes five discontinuous, irregularly-shaped study zones, reflecting the complex mining and land ownership history of this portion of the Mojave Desert. The largest of the study zones is a broad strip, averaging approximately 430 meters wide, that runs N-S the full length of Section 6 along its western side. Included here also is the northwestern corner of the section,

which forms a rectangle about 775 meters E-W and 430 meters N-S, and a narrow "arm" that extends southwards past the middle of the section. The remaining study zones are located in the rugged upper elevations of Soledad Mountain. Two study zones fall within two sections: on the east is a polygon falling within sections 6 and 5, which is about 675 meters, and averages approximately 180 meters wide; on the southeast is another polygon falling between Sections 7 and 8, which is about 180 meters wide and averages 850 meters long. A narrow rectangular study zone, approximately 325 meters long, is located in the east central portion of Section 6. Finally, an approximately rectangular polygon, located in the southeastern quarter of the section, constitutes the third study zone. It averages about 150 meters E-W and 460 meters N-S.

Following Bureau of Land Management guidelines (BLM 1988) and the "Secretary of the Interior's Standards and Guidelines, Archeology and Historic Preservation" (Federal Register 48(190):44716-44742; 29 September 1983), the Class III inventory of the Golden Queen project area involved background studies of the prehistory, ethnography and history of the Kern County region; detailed archival studies of published and unpublished articles and documents on the study area, per se; a review of archaeological records at pertinent repositories; the recording of interviews with and oral histories from a series of local residents; an intensive, complete (100%) survey of the project area; and the identification, recording and evaluation of sites within this study zone. The following sections of this chapter provide details on the background and contextual studies conducted for this inventory; specifically, a summary of regional prehistory, ethnography and history, and a research design for archaeological study in this portion of the Mojave Desert. We also provide

details of the archival studies and interviews and oral histories recorded for this project, particularly as directed towards the mining history of the study area. In the following chapter we provide details of the archaeological records search, conducted at the California Archaeological Inventory, Southern San Joaquin Valley Information Center, followed by a description of fieldwork methodology utilized during the inventory of the property. A description of identified historical and prehistoric sites is then presented, which includes a discussion of their current integrity. We conclude with a summary of the results of the field inventory, a determination of the eligibility of the sites within the study area to the National Register of Historic Places (NRHP), and a determination of effect of the proposed project on cultural resources.

1.1 Background Studies

1.11 Environmental Setting

The Golden Queen project area is located on Soledad Mountain, which forms a northward extension of the Rosamond Hills in southeastern Kern County, California. Physiographically, this places the study area slightly to the south of the Garlock Fault, and thus within the Antelope Valley (or western) portion of the Mojave Desert. More specifically, the study area sits within a zone of very steep and rugged terrain; for example, within Section 6 as a whole, elevations range from in excess of 4190 feet a.s.l. on a high peak near the southeast corner, to 2793 feet a.s.l. in the northeastern corner, while the northwestern and southwestern corners of the section are below 2900 feet a.s.l. Generally, terrain dips from south to north and from east to west, with the high peaks and ridges of Soledad Mountain

comprising the southern and eastern portions of the study area, and the open flats of the Mojave Desert to the north and west. Vegetation within the study area is primarily desert sage scrub, with creosote, spiny hopsage, mormon tea and, in disturbed areas, Russian thistle, present. During the survey a series of annual wildflowers were also in evidence.

In general, the ruggedness of the terrain, combined with the absence of natural resources such as seeps and springs or riparian environments, suggest that the study area would have constituted an unlikely location for prehistoric occupation, although occasional use can be assumed (e.g., for quarrying activities). Moreover, the diurnal and seasonal extremes that characterize this area, along with the rapid downslope colluviation engendered by the steep terrain, indicate that it is a region in which prehistoric archaeological site preservation would be relatively poor, especially for sites of any antiquity. Historical (i.e., Euro-American) archaeological sites, of course, are by definition more youthful, and thus less likely to have been destroyed by natural processes. Furthermore, historical activities in this region were much less tied to the same environmental constraints experienced by the prehistoric and ethnographic Native American populations, thus the nature of their distribution can be expected to in some cases vary significantly from that of the Native American sites.

1.12 Regional Prehistory

Recent regional summaries of the Antelope Valley prehistory have been published by Sutton (1988a, 1988b), with syntheses of the related Coso area immediately to the north published by Whitley et al (1988) and

Whitley (1994). Based on these studies, as well as the more wide-ranging cultural historical frameworks for eastern California provided by Hester (1973), Bettinger and Taylor (1974), Warren (1984) and Elston (1982), regional prehistory can be discussed in terms of a series of cultural historical periods, starting with the earliest evidence for human occupation in the western hemisphere.

Pre-Clovis (earlier than 11,200 YBP)

Perhaps the most long-lived problem in New World prehistory has been the question of the antiquity of first occupation, with two positions dividing the discipline: the Pre-Clovis or long chronology, which posits a Late Pleistocene first-migration at some undetermined point prior to 11,200 YBP (years before present); and the Clovis-first or short chronology hypothesis, which argues for an initial migration at the immediate end of the Pleistocene, now set at 11,200. Historically, the the Mojave Desert region has played an important role in this debate, due to the presence of putative early sites in the Manix Lake Basin, in Panamint Valley and around Pleistocene Lake China. E.L. Davis (e.g., 1978), in particular, argued for the presence of Pre-Clovis sites in the region based on three lines of evidence: typological similarities between surface lithic tool assemblages in this region and well-dated typologies in the Old World; the locational context of certain surface sites on well-dated Pleistocene lake terraces and sediments; and the association between surface cultural artifacts and dated paleontological remains.

Because Davis' evidence was based exclusively on surface finds that were, themselves, never directly dated using chronometric techniques, as well as typological comparisons, her conclusions were not widely accepted in the

profession. However, more recently developed evidence (Whitley and Dorn 1988, 1993) suggests an occupation of the Coso Range at least as early as 19,000 YBP, and perhaps as early as 30,000 YBP in the Lake Manix area of the Mojave Desert generally. These dates were obtained from the direct dating of the rock varnish coating petroglyphs and surface lithic tools, using three independent chronometric techniques: cation-ratio dating, which provides calibrated ages; AMS radiocarbon dating, which provides numerical dates; and the analysis of varnish micro-stratigraphy, which provides relative age control.

Based on these techniques, Whitley and Dorn have obtained a suite of seven Pre-Clovis age petroglyphs from the Coso area, in addition to a number of Holocene-dated specimens. The Pre-Clovis petroglyphs include dates that have been confirmed by independent assays on the same petroglyph, using each of these different techniques. For example, petroglyph CM-8 has a radiocarbon age (uncalibrated) of $14,070 \pm 130$ YBP (calibrated age, 14,930 YBP). The cation-ratio age on this same petroglyph is $14,200 \pm 1700$ YBP, thus providing independent one-sigma confirmation of the Pre-Clovis date. Most recently, advances in the analysis of varnish micro-stratigraphy allow for the identification of diagnostic temporal signals in SEM varnish thin-sections. Key micro-stratigraphic signals are present in the varnish thin-sections at the Pleistocene-Holocene transition, and at approximately 14,000 and 21,000 YBP. Coso petroglyphs dated between 14,000 and 19,000 based on AMS radiocarbon and cation-ratio dating display the 14,000 micro-stratigraphic diagnostic but not the 21,000 YBP signal, thus demonstrating that the chronometric techniques are correctly placing them in the proper part of the Pleistocene.

Similarly, a series of Pre-Clovis varnish ages have been obtained on surface artifacts from the Manic Lake Basin (Dorn et al 1986; Bamforth and Dorn 1988; Dorn et al 1992; Whitley and Dorn 1993). These include Manic Lake Lithic Industry specimens that have been independently dated with cation-ratio and AMS ^{14}C (and with confirmations provided by varnish micro-stratigraphic analyses) that include examples with CR and AMS ages falling within one-sigma standard deviations, and refit flake-core sequences that exhibit internal variances for their CR dates of less than 5%. The ages of these Manic Lake Lithic Industry dates extends back to roughly 30,000 years B.P.

Although there is some controversy concerning these early dates from the Cosos and other parts of the Mojave Desert, no cogent argument has been advanced explaining why they may be incorrect. Indeed, the most typical problem that confronts radiocarbon dating, contamination, would in this case result in younger, not older, ages, thus substantiating the Pre-Clovis argument. Moreover, there are a certain related circumstances that greatly bolster the Pre-Clovis position (Whitley and Dorn 1993). First, attention to the geomorphology and paleoclimatology of the latest Pleistocene indicates that the Pre-Clovis period was one of net erosional degradation. Lowered eustatic sea-levels combined with a series of major flood events resulted in the stripping of sediments in major portions of North America, rather than the gentle forms of deposition that are required for archaeological site preservation. An exception to this pattern occurred in the Basin and Range Province, where stable alluvial fans preserve Late Pleistocene groundsurfaces. Boulders and cliff faces containing rock art, as well, were also not subjected to this erosional

destruction. Thus, there are very few extant geomorphological contexts within which Pre-Clovis finds could be expected to be found. This explains why there is a sudden "explosion" of Clovis age sites and a relative dearth of Pre-Clovis sites in the archaeological record: the Clovis sites appear at exactly the point when the geomorphological conditions change to favor site preservation. Second, archaeological evidence from South America has included a number of well-dated Paleoindian sites falling between 10,000 and 11,200 YBP. As has been pointed out recently, it would have been physically impossible for first migrants to have entered North America sometime after 12,000 YBP and to have colonized South America within 1000 years; this would require rates of population growth unheard-of for human beings, and migration speeds that are manifestly implausible (Whitley and Dorn 1993). Thus, even the South American Paleoindian evidence tends to discount the likelihood of the short chronology for the peopling of the New World.

Although the evidence, accordingly, is mounting for the Pre-Clovis occupation of eastern California, at this point there is relatively little that can be said about this occupation, beyond the simple fact of its presence. Until additional evidence is presented, then, we will not be able to determine whether Pre-Clovis peoples were sedentary or mobile, or big-game hunters versus foragers.

Paleoindian (11,200 - 9000 YBP)

Although the initial occupation of the continent is controversial, there is widespread agreement on the subsequent Paleoindian period, which is typically viewed as pertaining to mobile big-game hunters who exploited Pleistocene megafauna. The hallmarks of the Paleoindian period are the

fluted, collaterally-flaked and basally thinned and ground Clovis and Folsom projectile points, during the earlier portions of the period, followed by a series of large, well-flaked but unfluted lanceolate points towards the end of the period. Some scenarios suggest that the big-game hunting practiced by these Paleoindian peoples may be responsible for the extinction of the Pleistocene megafauna, such as Imperial Mammoth, Bison antiquus, and the North American horse; however, recent evidence indicates that the earlier portions of the Paleoindian period comprised a lengthy and severe drought, thus demonstrating that the large mammal herds were already under extreme environmental stress, regardless of the effects of human predation (Haynes 1991). Regardless of the so-called Pleistocene overkill problem, the image of Paleoindians as specialized big-game hunters has become pervasive for North America.

Limited evidence of Paleoindian use of eastern California has been found in a number of areas, including Pilot Knob Valley, immediately to the south of the Garlock Fault; on the shores of Pleistocene Lake China, near Ridgecrest; Fort Irwin, east of Barstow; and, most recently, in the El Paso Mountains, northeast of the study area (e.g., Davis 1978; Warren and Phagan 1988; Yohe 1992b). Typically, this evidence consists of isolated (in some cases reused) Paleoindian projectile points, although there is also evidence for Paleoindian petroglyph manufacture in the Cosos (Whitley and Dorn 1987, 1988), with unpublished and at this point unverified reports of megafaunal depictions in the art. Furthermore, an obsidian Paleoindian point from the central Mojave Desert has been sourced to the Coso Sugarloaf Quarry (Sutton and Wilke 1984). These isolated finds and occurrences at a minimum are indicative of at least sporadic Paleoindian use of the region.

Although it is likely that more substantial Paleoindian habitation sites are somewhere preserved in the region, they have yet to be found and a better understanding of the Paleoindian period in this portion of eastern California will only be obtained when such sites are discovered and investigated (cf. Warren and Phagan 1988). In the meantime, growing evidence for Paleoindian occupation, in the form of two Clovis-like projectile points, has been discovered immediately northwest of the Antelope Valley (Glennan 1971; Zimmerman et al 1989), as well as on the off-shore Channel Islands (Morris and Erlandson 1993). With the maritime adaptation this last find implies, it suggests that the monolithic interpretation of all North American Paleoindian period sites as necessarily a product of specialized big-game hunting may be incorrect, and that more regional subsistence variation may emerge once better evidence from the far west has been discovered and analyzed (cf. Willig and Aikens 1988).

Early Archaic (9000 - 6000 YBP)

The Early Archaic period, or so-called Western Pluvial Lakes Tradition, represents the early Holocene in paleoenvironmental terms. Its hallmark is the widely dispersed but ambiguously-dated Western Stemmed Tradition projectile points. These include the local variants known as Lake Mohave and Silver Lake points, which may in fact actually date between 10,500 and 7,500 YBP. Combined with studies of the lithic technologies of Early Archaic and Paleoindian sites, this chronological overlap suggests that the Western Stemmed Tradition was an in-situ development out of the earlier Paleoindian tradition (Willig and Aikens 1988).

Early Archaic sites are most commonly found on the lowest terraces above

latest Pleistocene and early Holocene lake basins and stream deltas (in the Antelope Valley region, these would correspond to the margins of Pleistocene Lake Thompson). They are, accordingly, widely regarded as part of a lacustrine-focussed adaptive strategy. Although a number of authors have cautioned against too simplistic an interpretation of these associations, pointing out that Early Archaic sites are also found in other environments, it nonetheless is apparent that, in eastern California at least, this environmental association and its inferred subsistence implications maintain some verity. Indeed, it can be noted that recent research in the Great Basin has exactly emphasized the general importance of lacustrine adaptations, in contrast to Jennings' (1957) earlier model of a long-lived "desert culture" tradition.

Be these controversies as they may, Early Archaic projectile points are occasionally found in the Antelope Valley, but the sites themselves are relatively rare. For example, Sutton (1988a) lists CA-KER-322 as the only known example of such sites in the Antelope Valley region. Instead, sites of this age are more common in the Basin and Range country proper, to the north. For example, Davis (1978; Davis, Brott and Weide 1969) has identified and discussed the importance of a number of putative Early Archaic sites in the Panamint region. These are located in both the China Lake Basin and the Panamint Valley in former lacustrine environments, and are indicative of the fact that some lakeshore use if not occupation did occur during the early Holocene in this region. However, this must be matched against the fact that Western Stemmed Tradition points have also been recovered as isolates in upland environments in the Cosos (Elston et al 1983). Thus, although lakeshore exploitation may have been an emphasis during the Early Archaic in eastern California, this apparently

also incorporated mobile hunting into other environments as well.

Middle Archaic (6000 to 4000 YBP)

Be this early evidence as it may, what is incontrovertible is that, regardless of date of initial occupation, substantial inhabitation did not occur until much later, with the start of the Middle Archaic or Pinto Period, at about 6000 years B.P. This lasted until approximately 4000 years B.P. A number of sites from this time period are known from the Rosamond area, specifically associated with the prehistoric shoreline of Rosamond Lake. Notably, sites dating to this time period apparently emphasize the use of rhyolite as a lithic resource, almost to the exclusion of crypto-crystallates, such as chert and jasper (Sutton 1988a, 1988b).

The Middle Archaic, however, corresponds essentially to the Altithermal paleoenvironmental period, and is a controversial topic in Mojave desert prehistory due to its cultural and chronological ambiguity. Much of the ambiguity stems from the uncertainty in the chronological placement of the Pinto series projectile points. Seemingly, there are as many chronological scenarios for the placement of Pinto points as there are archaeologists working on the problem (cf. Meighan 1981; Jenkins and Warren 1984). What this ultimately may suggest is that much more regional variation existed during certain periods of the prehistoric past than is currently being recognized.

In the Coso area to the north, but not necessarily elsewhere in eastern California, there is little if any evidence for Middle Archaic occupation, at least if Meighan's (1981) obsidian hydration date revisions for the Pinto series points from the Little Lake site are accepted. That is, existing

evidence could be interpreted to signal a diminution in occupation, if not an outright abandonment, in this region, apparently corresponding to the hot and dry climatological conditions of the Altithermal. However, it is also possible that local inhabitants may have adopted a subsistence strategy and settlement pattern with little archaeological visibility on the landscape during this period; e.g., a highly mobile pattern. Although this alternative interpretation of the apparent dearth of Middle Archaic sites must be acknowledged, it seems implausible in light of the fact that extremely dry conditions would be more commonly predicted to result in a stronger form of "tethered nomadism", and thus greater archaeological visibility, around water sources. Moreover, there is clear evidence for Middle Archaic settlements in the Fort Irwin area (e.g., Jenkins and Warren 1984), to the east of Barstow, suggesting that not all portions of eastern California were abandoned at this time; again, emphasizing the possibility of more regional variability than heretofore acknowledged.

Late Archaic (4000 to 1500 YBP)

Much less controversy surrounds the subsequent Late Archaic period, or Elko Period, lasting from about 4000 to 1500 years B.P., which correlates with improved and wetter environmental conditions across the far west. Although sites from this time period are sometimes considered rare in the Mojave Desert, it is notable that many of the subsequent Rose Spring Period villages (see below) were first occupied during this earlier phase. That is, as has been noted by a number of authors, there seems to be a strong continuity between the Elko Period and subsequent times, with the latter period materials masking or burying the Elko remains. In the Antelope Valley region this begins with a major increase in population beginning about 3000 years B.P. (Sutton 1988b:23).

Similar patterns have been noted in surrounding regions. For example, the start of the Late Archaic in the Coso Range region is posited to represent the initial establishment of the primary settlement and subsistence systems that are currently archaeologically visible (Whitley 1994), while this same period has been recognized as experiencing a major, far western North American-wide expansion of settlements into new environments and increases in population, stretching from the Great Basin of eastern California, through the southern Sierra Nevada, across the Transverse Ranges, and down to the coast (Whitley, Gumerman and Simon n.d.). The primary temporal diagnostics for the Late Archaic are Elko and Gypsum series projectile points.

In the Coso Range, the Late Archaic is signaled by the establishment of major winter villages, typically at springs, in valley bottoms on the western and wetter side of the range. Analyses of paleoethnobotanical and faunal remains suggest a generalized foraging strategy, emphasizing all available resources (e.g., Gumerman 1985), including buckwheat stands around small mud-playas (Whitley et al 1988). This evidence is complemented by an extensive but seemingly non-logistically organized use of all upland environments. Included here is a significant quantity of isolated projectile points in the uplands, suggesting mobile hunting patterns (Elston et al 1983). Furthermore, the Late Archaic witnessed the beginning of the intensive exploitation of the Coso Sugarloaf obsidian quarry, an event that apparently correlates with the beginning of the inland-to-coastal obsidian trade in south-central California (Whitley, Gumerman and Simon n.d.).

Rose Spring (1500 - 800 YBP)

The Rose Spring Period is differentiated from the earlier Late Archaic/Elko Period by the introduction of the bow and arrow and a change from spear points to arrow points at circa AD 500 (cf. Yohe 1992a). This transition is, in technical terms, dramatic. In fact, the introduction of this new weaponry technology probably did not have any immediate major impacts on social or cultural systems. At least initially, the settlement and subsistence systems were stable, and lithic technology and production did not noticeably change (Allen 1986).

Moreover, and as implied above, in all other respects Rose Spring times appear to have been a continuum from the earlier patterns, so that the change in hunting technology was probably less important than we might otherwise presume. Within the Antelope Valley area, Desert Village Complexes, representing a major change in magnitude of settlements, were founded at least by Rose Spring times, and perhaps towards the end of the earlier Elko phase. Two of these have been identified by Sutton (1988a, 1988b) in the foothills of the Antelope Valley, with a third between Rosamond and Rogers Dry Lake, and a possible fourth at Koehn Lake. It is possible, if not likely, that these represent the founding of the tribelet system of political organization in the region.

At approximately AD 1000 - 1200, however, a shift in settlement and subsistence practices began that, ultimately, culminated in the protohistoric/ethnographic patterns referred to as the Later Prehistoric or Numic Period (discussed below). This involved the abandonment of some winter villages (or at least a reduction in the intensity of their use); the establishment of logistical base camps around springs in the upland

environments; an increasing emphasis on a relatively specialized diet focused on seeds and the pinyon nut; and a great increase in the production of petroglyphs (Whitley 1994). That is, settlement patterns became more organized and focused, while subsistence was increasingly specialized, and ritual became more common.

The causes for this transition are not yet fully understood. Bettinger and Baumhoff (1982), for example, have accepted it as an empirical fact, with the subsistence change then linked to the putative spread of Numic peoples out of eastern California at about this time. They have then taken the position that the phenomenon to be explained is not the cause of the subsistence change, but the reasons why such a change was adaptively more successful, and how it can then be used to account for the historical distribution of Numic languages. The implicit assumption in such an approach is that evolutionary transitions are to be expected due to the inherent tendency for greater fitness to emerge in populations.

While this last tendency may or may not be so, it overlooks pertinent related evidence; namely, that this same time period experienced a major drought that effected all portions of western North America, from northern Mexico through the Southwest, across the Great Basin, and even into the Channel Islands. Moreover, the environmental stress engendered by this drought has been cited as a causal factor in the abandonment of Anasazi pueblos in the Southwest, as well as the southward retreat of Mesoamerican civilization with the collapse of Tula. Perhaps more to the point, Arnold (1993) has noted the influence of this drought in creating resource stress that was a contributing factor to the appearance of a simple chiefdom in the Chumash region near Santa Barbara. Similarly, Whitley

(1994) has argued that this transition in eastern California represents the first appearance of Numic bands and headmen; specifically, that it was the increasing perceived need for ritual specialists in the form of rain shamans during this period of environmental degradation that led to the establishment of bands and the creation of headmen. In this interpretation, the accelerated production of Coso petroglyphs (which are known ethnographically to have been tied to rain shamanism) is taken as a reflection of the growing number of ritual specialists, with the appearance of a logistically-oriented settlement pattern a sign of increasing sociopolitical control and organization.

Late Prehistoric (800 - 140 YBP)

The Late Prehistoric (or, in some areas, Numic) Period, from 800 years B.P. to the Historic Period, represents a continued growth in local population, with numbers of people apparently quite high. It is distinguished from previous Rose Spring times by the introduction of brownware ceramics and a change in projectile point types: from Rose Springs types to Desert Side-Notched and Cottonwood Triangular. Sutton (1988a, 1988b) notes that a boundary of some sort developed during this period: Desert Side-Notched points, brownware ceramics and obsidian are all common from the Fremont Valley northward; south of this area, in the Antelope Valley proper, ceramics and obsidian are rare, and Cottonwood Triangular points are the predominant projectile point type. This apparently correlates with similar patterns further towards the coast: at about 800-1000 years ago the desert-to-coast obsidian trade dried up, and Rose Spring-like projectile points were replaced by Cottonwood-like points, with Desert Side-Notched points rare.

The Protohistoric/Historic phase of the Late Prehistoric, representing the last 300 years, is apparently marked by a major disruption in indigenous settlement, and a corresponding paucity of sites. According to Earle (1990), missionization pulled many of the region's inhabitants away. Subsequently, the Antelope Valley area was used as a staging ground for rustlers and other miscreants, who were raiding the missions' livestock. The result was that the area became somewhat of a no-man's land which, no doubt, has also contributed to the paucity of ethnographic information on it.

1.13 Regional Ethnography

The Antelope Valley and environs are, unfortunately, one of the most poorly known regions, ethnographically speaking, in California, which is a state that is generally renowned for the detail of its ethnographic record (cf. Kroeber 1925). Thus, the valley contrasts quite sharply with certain of its immediately surrounding areas, such as the southern Sierra Nevada to the north, for which there is a wealth of ethnographic reports and data, and even the Santa Barbara Channel region to the west/southwest. Even though the ethnographic inhabitants of this last area were disrupted very early-on by missionization, our record of their life ways is nonetheless more complete than for the groups that inhabited the Antelope Valley. Luckily, some of the early confusions and misconceptions concerning even such fundamental problems as who the ethnographic inhabitants of the Western Mojave Desert area actually were are now becoming clarified. Earle (1990), in particular, has done much to disentangle previous misconceptions concerning the ethnolinguistic affiliations of the Antelope

Valley's inhabitants, and a summary of his recent ethnohistorical conclusions provides an appropriate overview for the aboriginal history of the region.

According to Earle's reconstruction, the Valley was inhabited during the Historic/Protohistoric period by three distinct language-speakers, one group of whom could be further subdivided into two (and perhaps three) fairly distinctive dialects. The most significant linguistic division existed between the Kawaiisu speakers, who lived in Tehachapi Valley, through the southern Sierra Nevada and eastward across Fremont Valley towards Red Mountain and into southern Panamint Valley, and the groups to the south and west in Antelope Valley, per se. The Kawaiisu language is a member of the Numic branch of the Uto-Aztecan language family, and is thereby most closely related to the Shoshonean and Paiute languages of the Great Basin.

South and westward of the Kawaiisu were two other members of the Uto-Aztecan language family, but in this instance both were distinct languages belonging to the Takic (as opposed to Numic) branch, specifically to the Serran Takic branch. Along the southwesternmost side of the valley, including the northern foothills of the Liebre Mountains and the southern side of the Sierra Pelona, were the Tataviam, a little-known group identified by a few early word lists. Related to them linguistically, but speaking a distinct language, were the better-known Kitanemuk, who occupied the western Antelope Valley and the Tehachapi Mountains west of Tehachapi Pass. Living to the east of the Kitanemuk, who extended to approximately the current location of Highway 14 where it heads north across the Valley, were a group of closely related peoples that Earle

(1990) has identified as the Haminat. Apparently, Haminat and Kitanemuk represent dialects of the Serrano language, which also included Serrano proper and Vanyume (or Beñemé).

According to Earle's analysis, there was a linguistic continuum along the northern side of the San Gabriel Mountains in the Western Mojave Desert, from the Serrano on the east through the Vanyume and Haminat to the Kitanemuk, at the western end. Haminat, apparently, was more closely linked with Vanyume/Serrano proper than Kitanemuk, although it was still simply a dialectical variant of it. But, with the Serran continuum along the northern side of the San Gabriels, and with all of this linguistic variation present during the Historic period, it is easy to understand how ethnographic confusion developed in regards to this region.

The Golden Queen study area falls near the boundary of Kitanemuk and Haminat territories, and may have, at different times, been used by both groups. Perhaps more important than these minor linguistic distinctions, similar cultural patterns were followed by all the inhabitants of the region, with certain minor distinctions. In terms of subsistence, for example, all groups were foragers, with food sources derived principally from gathering. The exact plant species exploited was dependent on seasonal availability, as well as geographical/environmental location. In the higher, montane portions of the region (e.g., towards Tehachapi and along the slopes of the San Gabriels), acorn-bearing oak and pinyon pine nuts were staples. In the lower lying, more desertic zones, mesquite, yucca and a variety of other edible plants were emphasized. Hunting also contributed meat protein, and principally emphasized small game, such as hares, rabbits and rodents. However, the notion that these hunter-gatherers

based their subsistence to large degree on big-game hunting (such as deer, antelope and mountain sheep) has proven to be an anthropological myth.

Cultural commonalities were also maintained in religious beliefs and practices, which were uniformly based on shamanism. This is predicated upon perceived direct and personal interactions between an individual and the supernatural world, with this interaction founded on entering an altered state of consciousness. Shamans, per se, were ritual specialists who held an unusual degree of interaction with the supernatural world, and thereby acquired a high degree of supernatural power. Although formal rituals and ceremonies were limited in number and elaboration, the shamans served as the ritual officers for these. Further, the shamans also were responsible for painting and pecking the rock art that is found in this region: rock art sites served as their vision quest locales, where the shamans entered trances to have visions and thereby acquire supernatural power. And, the art depicted at these sites displayed the visions and spirits they saw in their altered states of consciousness (Whitley 1988, 1992, 1996).

Following general California patterns, there were also a number of similarities in social and political organization across the Antelope Valley. Earle (1990) has suggested that the Haminat may have been organized into exogamous clans and moieties, whereas the western groups might have lacked these, and in this sense the Haminat could have been more like the southern California Desert groups like the Serrano and Cahuilla, with the other groups more similar to the south-central California culture of the Chumash and related peoples. However, given that the exact social organizational systems of the Chumash have yet to be defined (for

example, there is still debate whether they were matrilineal or patrilineal), and since we do not yet know whether they had a moiety system or lacked it entirely, it may be too early to draw such fine-grained distinctions concerning social organization.

What is apparent, however, is that the region as a whole apparently lacked any political organization beyond that of the tribelet, or what Earle has identified in the Spanish records as naciones. These were autonomous land-owning groups, focused on a principal village and led by a headman or chief, and probably comprising a lineage system or clan. In this sense, the Antelope Valley can be said to follow the political organizational pattern found throughout most of Native California. This, of course, further links it with Californian, as opposed to Great Basin, cultural patterns.

1.14 Historical Background

Perhaps because of the use of the Antelope Valley as a staging area for Indian raids on the estancias and missions closer to the coast, Euro-American settlement and development of the area was a little later dating than in other parts of southern California. As a result, the history of the Antelope Valley to about the 1860s principally involved various explorers who traversed it: for example, Pedro Fages crossed the southern valley in 1772; Fr. Garcés crossed the west end and went through Willow Springs (southwest of the Golden Queen study area) in 1776; Jedediah Smith, similarly, went across the western valley in 1827 and also visited Willow Springs, as did John C. Fremont and his guide Kit Carson in 1844. The Rogers and Manly party - the Jayhawkers or Death Valley '49ers - camped

at Willow Springs towards the end of their dramatic 1849 expedition across the Mojave Desert, as well. And Lt. Edward Beale, at the lead of a caravan of camels, came across the southern side of the valley in his 1857 trip to Fort Tejon (Bancroft 1963; Settle 1963:61; Boyd et al 1982; Starr 1988).

It was not until the 1860s that the first settlers moved into this region, settling mostly in the Elizabeth Lake region and the southern foothills of the Tehachapi Mountains, and involved principally in ranching. With the development in 1868 of the Cerro Gordo silver mine in Inyo County, however, the Antelope Valley became a major thoroughfare for the movement of bullion and goods between Los Angeles and the Owens Valley (Chalfant 1933); indeed, efforts to wrestle control over the Inyo silver trade away from Los Angeles became a major theme of California economic history in the 1870s (Nadeau 1965). Los Angeles managed to maintain its monopolization of this trade, nonetheless, with Remi Nadeau's freight-line playing a major part in the transshipment of goods and ore across the valley. Willow Springs and its adobe tavern, again, served as a major stop on this route, with the stage line then essentially heading south (on the route that would eventually be adopted by the railroad), for a 28 mile stretch through Cow Hole to Barrel Springs, at the mouth of Soledad Canyon, and subsequently through the canyon for the uphill climb through the San Gabriel Mountains. Old Nadeau Road, which parallels Pearblossom Highway near the Vincent Hills at the southern end of Palmdale, is apparently a remnant of this original freight-line route, which proved so instrumental in the growth of Los Angeles as the economic center of southern California.

Shortly after the establishment of the first permanent school in the region, in 1869 at Elizabeth Lake, a number of settlers' colonies sprang-up within the valley, including Wicks, Manzana, Chicago, Kingsbury, John Brown, Old Palmdale, Almondale and Llano (Settle 1963). However, the major impetus to settlement resulted with the completion of the Southern Pacific railway through the valley in 1876. One immediate result of the rail line was the establishment of the town of Mojave in this same year. The coming of the rails also fostered the establishment of towns such as Rosamond, Lancaster and Palmdale, which appeared by 1882.

The Southern Pacific Railroad arrived in Mojave on August 8, 1876. The location of the current depot, on the west side of Highway 14, was the location of the original depot site, although the existing depot building is a later construction. A freight depot was added on August 20 of the same year and, before long, the town turned into a division point for the rail line. With the railhead at Mojave, the San Bernardino Borax Company began hauling its borax to the town on mule teams; the Baldheaded Eagle Borax Company began using the town as its railhead a few years later, in 1881. The Santa Fe Railroad arrived in 1884, as did the famous "20 Mule Teams" of the Pacific Borax Company, truly making the town a transportation hub for the region. The Pacific Borax Company continued with its mule team loads to the railhead until 1889, when a spur line reached their mining operations (Deaver 1967).

The original town site of Mojave was layed-out by the Southern Pacific at the time that the rail went through. Initially it was simply a residential camp for railroad employees consisting of a few wooden shacks, but it was of sufficient importance that a post office was opened in October, 1876.

Because of its position as a transportation hub, Mojave quickly attracted additional residents but was not filed as a subdivision until 1905 (ibid). Growth at and after that point was spurred by two early twentieth century developments. The first was the increasingly important mining activities at Standard Hill and Soledad Mountain, south of town. The second was the construction of the Los Angeles Aqueduct, built between 1907 and 1913, which brought literally thousands of workers into the region. In addition to its function as a transport hub, Mojave served as the "watering hole" for the mine and aqueduct crews, and was widely renowned for its saloons and brothels, which were said to outnumber the churches in town by 10 to one.

The historical importance of the Golden Queen study area, of course, primarily concerns the mining history of the Mojave Desert. This has been summarized in period and more recent publications, with Brown (1915), Clark (1970), Hensher and Vredenburg (1991), Miller and Miller (1976), Settle (1963, 1967), Settle and Settle (1984), Troili (1908), Troxel and Morton (1962), Tucker (1923, 1935), Tucker and Sampson (1933), and Tucker, Sampson and Oakeshott (1949) constituting the primary sources. The history of this area has been synthesized from these and other sources.

The first recorded mining activity in the region occurred on March 8, 1894, when W.W. Bowers found gold on a promontory south of Mojave, then known as Little Buttes (subsequently changed to Bower's Hill and now Standard Hill). His first claim was the famous Exposed Treasure mine, which he brought into operation shortly thereafter, shipping ore worth \$60/ton. By 1896 a camp had sprung up around this site (Hensher and

Vredenburg 1991). The Exposed Treasure discovery apparently spurred local interest in prospecting as, later in 1894, Ezra M. Hamilton discovered gold in the Rosamond Hills, to the south, at a location that would eventually become known as Tropic (Settle 1963, 1967).

Mining activities within the Golden Queen study area were apparently stimulated by the Exposed Treasure discovery, and can be divided generally into three periods. The first period of mining activity on Soledad Mountain stretched from approximately 1894 to 1914, and was an era of prospecting and the development of a series of early properties, mines and mills (Tucker 1935). The three primary mines in operation during this period were the Karma, Queen Esther and Echo, located on the central-northern slope of the Soledad Mountain, outside of the study area. Each of these mines had their own mills which, unfortunately, were relatively short-lived. The Karma mill was opened in 1903 and closed in 1909; Queen Esther, opened the same year, managed to stay in operation a year longer; and Echo, also opening in 1903, was closed in 1905 and dismantled in 1906. A considerable population, estimated to have been as high as 200 people, nonetheless developed around the Karma and Queen Esther mine operations at their peaks (G. Meehl, personal communication, 1995). This too was seemingly short-lived, with only a handful of residents staying on the mountain beyond 1910.

Lesser amounts of mining also occurred on the Eagle Group and Bobtail claims, although neither had associated mills or populations at this time (see below). The last two group of claims, located on the northwestern extreme and western side of the mountain, fall within the Class III inventory study area.

Activity was minimal in the region as a whole from about 1922 to the start of the Depression when, like many mining regions in the west, numerous small scale mining efforts were started. According to Tucker (speaking of the Mojave mining district as a whole, which included the Tropico area 17 miles to the south and Standard Hill to the north), about 50 to 70 leasers worked old mines from 1931 to 1934, hauling their ore to the Tropico for milling (Tucker 1935). During this period Engelbert Wegmen purchased and ultimately patented the Karma mine and mill.

Activity accelerated dramatically during the mid-1930s on Soledad Mountain, however, when the Mojave Mining District was revived by the discovery of the Silver Queen vein, leading subsequently to the establishment of the Golden Queen mine and mill. This represented the second primary period of mining within the study area, with the Golden Queen building a major cyanide plant, and consolidating a number of the earlier claims and patents. Built by the American Gold Fields Company, a subsidiary of the British company, South African Gold Fields, the Golden Queen is said to have had a total production of about \$10 million during its operation between late 1935 and 1942. According to original accounting records we have obtained for 64 months dating between early 1936 and June 1941, actual receipts for gold bullion sold by the Golden Queen Mining Company totaled \$7,867,782, with an average of about \$123,000/month produced. Given that some months are missing, the \$10 million estimate is a reasonable ballpark figure.

In addition to the Silver Queen group, the Golden Queen included the Echo, Queen Esther, Independence, Gray Eagle and Soledad Extension claims and

patents. The mill also conducted a significant amount of custom milling for small miners, including Wegmen's then-ongoing activities at the Karma. Again, the original accounting records we have obtained list that the mill purchased \$2,200,736 in ore from its custom mill clients. This is about 29% of their total ore sales for the 64 month period included in the accounting records, indicating that other mining properties in the region were conducting substantial mining activities at this time. However, while we have been able to verify that Engelbert Wegmen was running ore from his Karma property through the Golden Queen mill (G. Meehl, personal communication, 1995), it is entirely unclear where the remaining ore originated. Logically, some of this also may have been derived from claims and mines on Soledad Mountain. Inasmuch as there are a number of other mining zones within the Mojave Mining District (such as Standard Hill), however, and because the Golden Queen was the only state-of-the-art mill in the immediate region at this time, it is likely that some of the custom milling was completed for mines not on the mountain.

Depression era mining terminated in 1942 with the official closure of all gold mines by the War Production Board. After the war, mining started once again, though in small-scale. However, the Golden Queen mill was dismantled in about 1950, and none of the other mills were ever restarted, necessarily limiting the mining to small operations. Mining has continued into the 1990s, in the sense that claims have been kept active, minor operations on small veins have been undertaken, and occasional constructions of truck chutes and other equipment has occurred. For example, a truck ore chute and electrical jaw crusher at the Karma mine sit on a concrete foundation dated 1980.

Elephant Group

Among the first known mining claims in the Golden Queen study area were the Elephant Group claims, staked by E.T. Baker in 1896. Baker apparently worked this area on the northwestern tip of Soledad Mountain on a small but profitable basis until 1918, when he sold it. Ownership changed a number of times subsequently, and it was worked by lessees. But by 1916, Baker had dug a 100' shaft with a few hundred feet of horizontal workings and mined a stope that was 120 feet long at the 100' level. His ore was running at 0.75 - 3.5 ounces/ton, and he had hit a hot spot that had 3.5 tons worth \$7,000, and another 70 tons worth \$1000/ton. Baker did not install a mill during his tenure at the Elephant mine, instead shipping his ore to the American Mining and Smelting Company in Selby, CA (Troxel and Morton 1962).

Around 1920, however, a 25 tons/day ball mill and amalgamation plates were installed at the mine. This was converted to cyanidation circa 1930 which, by 1935, resulted in a rod mill that putatively was running at a 60 tons/day capacity. The mill consisted of a 50 ton ore bin feeding a 1" grizzly and gyratory crusher, which fed a 50 ton fine-ore bin. A Gates belt feeder then led to a 4'x8' Marathon rod mill with a Dorr Duplex Classifier, mercury amalgamation trap and cyanide solution vats. At that time the mine and mill were employing 24 men "on company time", with another 50 leases operating on the property (Tucker 1935). Ownership appears to have changed hands a few times during this period: the name of the operation was changed from the Elephant Group to the Elephant-Eagle Group in 1934, and then the Lodestar from 1935 to 1941. It has been known as the Elephant Group once again since 1941 (Kern County Hall of Records, Mining Claims).

These series of name changes appear to reflect changing business ventures between various owners of these and other claims. For example, by 1935 the 100 acres Elephant Group was owned by Jesse Knight, who was in partnership with John M. Rogers and Associates, who were themselves owners of the 160 acres Echo, Gray Eagle and Starlight Mines, 60 acres of which were patented (Tucker 1935). All of these claims/mines were operated under one manager (Rogers), with the ore putatively milled at the Eagle plant. As this arrangement changed, so apparently too did the name of the mining claims group.

Regardless of the precise details of business partnerships and mine ownership, mining was continuous from 1931 to 1942, although productivity was low: according to published sources (but see below), only about 3000 tons of ore were mined. The yield on this averaged 0.5 to 0.75 ounces per ton but the gold to silver ratio of the concentrate was 3 to 4. Immediately after World War II a few hundred tons of ore were mined by lessees, producing 0.7 ounces/ton. In the 1950s the mill burned and was not rebuilt, although truck ore chutes were reconstructed from scavenged lumber. Some efforts were also made to rework the tailings dumps, but these were largely unsuccessful. Still, judging from some modern buildings, truck chutes and assay remains, it appears that the mine has kept active into the recent past.

However, it needs be noted at this time that there is little if any extant evidence for mill tailings at this site (as is discussed subsequently) and, in fact, little evidence of traces of tailings that would have once been present at this locale, even if reworked. Thus, there is cause for some skepticism of these published estimates for this site. Total production of the mine,

nonetheless, is estimated at about \$250,000, and it is still owned by the Knight family (Troxel and Morton 1962).

A picture of the mill, in the distance, was published by Tucker in 1935. The mill is unfortunately too distant, and the photo too poor, to reveal any pertinent details. However, a 1936 mineral survey (Mineral Survey No. 6190; Figure 2) provides a plot of improvements and constructions at the mill site, at that time. According to this mineral plat, Paul C. Staples (rather than Jesse Knight) was then the owner of the Elephant and Charity claims, which were never taken to patent. Nonetheless, the total value of the improvements on the property is listed at \$49,350, and are said to consist of: two incline shafts; one incline shaft and drifts; one tunnel; two tunnels and drifts; one tunnel, drift and raise; one tunnel, winze and raise; and one open stope. This plat also shows a series of improvements on the surface which, curiously, are not included in the above total or list. They include: the mill; an office building; an office building and another building south/southwest of the mill; a boarding house; and a series of other unidentified buildings north and east of the boarding house.

Jesse Knight, who by all other accounts owned the Elephant Group by the mid-1930s, was the father of Goodwin J. Knight, the 31st governor of California, who served between Earl Warren and Edmund G. Brown, from 1953 to 1959 (Melendy and Gilbert 1965:427). "Goodie" Knight, as he was known, was born in 1896 in Provo, Utah, moving with his father Jesse and mother, Lillie Milner Knight, to Los Angeles in 1904. According to a short biography of the former governor, Jesse Knight was a lawyer and mining engineer, while his son worked for a year in Nevada mines before attending Stanford and Cornell, to earn a law degree, obtain appointments

to various judgeships, and eventually have a very successful political career (ibid).

As implied above, the historical accounts and documentary evidence concerning the Elephant-Eagle mine and mill are somewhat contradictory and, while this is not unusual when investigating mining history, in this case they are more contradictory than typical. Although there is substantial evidence for mining activities above the mill, as we shall see there is little evidence that the mill itself was ever involved in substantial output, even given the published reference to reworking the tailings in the 1950s. Instead, the Elephant-Eagle mine can be best understood as a peripheral area during the early period of mining activities on Soledad Mountain. It was more active during the 1920s and 1930s and, for a time, may have been the only active mill on the mountain. However, frequent reference to the working of the claims by lessees during this period gives the appearance that the mill may have primarily been used as a custom mill for the lessees, with the mine owners leasing portions of the claim to interested miners and then providing an in-house milling service for their recovered ores, but not themselves running a large-scale operation. Regardless of precise circumstance, it is clear that the Elephant-Eagle was a small and relatively insignificant producer.

Bobtail Mine

The Bobtail Mine, located on the northwestern side of Soledad Mountain, was discovered around 1900, and has been mined intermittently from 1902 to the present. Total production is estimated to have been in the \$50,000 to \$100,000 range (Troxel and Morton 1962).

The earliest recorded shipment from the mine, in 1902, consisted of 250 tons containing 1.3 ounces of gold per ton. The Bobtail was consolidated with the Echo group in 1906 for a period, and in fact it intersects the Echo group workings, which lie outside of the Class III inventory study area. Troxel and Morton (1962), however, have estimated that more than 80% of the production of the Bobtail mine occurred between 1923 and 1942, with the ore averaging 0.52 ounces of gold and 0.33 ounces of silver per ton. From 1949 to 1951, in addition, another 50 to 60 tons of ore were mined (ibid).

For the duration of the use of the Bobtail Mine, no mill or related features were ever constructed, with improvements consisting solely of adits, shafts, head frames and ore chutes. In fact, as archaeological evidence attests, much of the mining on the Bobtail and nearby claims consisted of the exploitation of surface veins, requiring the development of long, narrow open stopes, which themselves necessitated a minimum of infrastructural development. Milling, likewise, was then performed on a custom basis by the other nearby mills. Most likely, much of this occurred at the Golden Queen Mill, prior to World War II, which (as noted above) ran a substantial quantity of custom ore for surrounding mines.

1.2 Research Design

The "Secretary of the Interior's Standards and Guidelines, Archeology and Historic Preservation" (Federal Register, Vol. 48, No. 190; September 29, 1983) require that all cultural resource studies be conducted within the framework of a research design. Aspects of this research design can be

considered methodological and procedural, and are discussed in a subsequent section of this report. Also important are the intellectual research problems, beyond the management concerns, that motivate and inform a particular study. In this section, some of the major regional research problems are discussed as potential intellectual guides for the interpretation of primary data from the Golden Queen study area, recognizing that, in a project area this small, the appropriateness of these problems is subject to the kinds of data that prove to be present, and that the final resolution of these intellectual research problems may not be feasible unless and until additional phases of archaeological study are conducted.

Prehistoric Archaeology

Current research in the Mojave Desert/Antelope Valley region has emphasized two specific problems, among a series of others: the nature of the Middle Archaic/Pinto Period occupation; and the causes and consequences of the appearance of villages at about 3000 YBP. As regards the so-called "Pinto Problem", there are three issues of contention: the typological definition of the Pinto series points; their chronological placement; and the nature of the Pinto Period occupation more generally. Obviously, aspects of these three issues are definitional in nature, but they are also clearly inter-related. Furthermore, the definitional issues reflect problems with understanding the nature of the regional variation in point types in the Mojave Desert, rather than problems in the mechanics of point morphology and typological ordering, per se.

Concern with the nature and the causes of the appearances of villages at circa 3000 YBP is linked with a larger interpretation of this phenomena as

one that occurred across the far west at this time, and that reflects a generalized increase in population and movement into new environmental zones. In inland coastal (i.e., mesic) southern California, it has been unclear whether the appearance of inland villages at about this date was a function of population increase and adaptive spread, or simply a reflection of localized site preservation processes. More to the point, however, is the fact that the appearance of these inland coastal villages is accompanied by the appearance of a smaller sites in these same environmental zones. the pertinent issue with respect to the Mojave desert, then, is whether the appearance of villages during Elko times reflects movements into new environmental zones, or simply a change in preexisting settlement and subsistence patterns within a given region.

Addressing either of these issues requires having appropriate data; specifically, data of appropriate age and from relevant site types. Furthermore, given the size of the Golden Queen project, it is obviously clear that these issues cannot be resolved simply from data obtained on this 800 acres study area. On the other hand, even isolated site and artifact data may add to our regional corpus of information concerning these issues and, in that way, contribute to the ultimate resolution of these problems.

Historical Archaeology

Donald Hardesty (1994; see also Hardesty 1988) has recently provided a review of and prospectus for historical archaeology, with particular emphasis on Great Basin mining sites. This provides the intellectual rationale for a regional research design, and is clearly applicable to the historical mining archaeology of the Mojave Desert, which was closely tied

to the larger Great Basin. According to Hardesty's review, common recent research perspectives currently being expressed in historical archaeological studies in the western United States include: (a) the archaeology of capitalism, particularly from a world-systems perspective; (b) class and power relations; (c) industrial ecology; and (d) the landscape archaeology of historical sites (cf. Leone and Potter [1988] for an eastern United States perspective). Relevant analytical units include: (i) mining towns as social formations; (ii) the domestic household; and (iii) regional communities (Hardesty 1994). Based on Hardesty's considerable experience with the historical archaeology of the Great Basin, he suggests that the most productive direction for future research will be in analyses intended to elucidate the regional characteristics of Great Basin capitalist development; that is, those unique regional characteristics of the otherwise worldwide spread of capitalism that occurred in the nineteenth and early twentieth centuries in this portion of the west.

Hardesty's suggested research program has two immediate implications. The first is that it is necessarily comparative in nature. Characteristics of the spread of capitalism that are unique to the Great Basin are only unique relative to the historical record in other regions of the United States (if not the world), thus the context of any comparative analysis must be wide-ranging in scope. Second, that portion of the historical archaeological record that is most relevant for analysis is the habitation and settlement, rather than engineering, debris of these sites. That is, while not denying the potential importance of the industrial/engineering remains in western mining towns (e.g., Andrews 1994), the emphasis in future research should be on the housing and commercial districts, rather than the industrial/engineering remains themselves.

When Hardesty's suggested research directions are considered in the context of the Golden Queen study area and the historical background summarized above, issues, concerns, and research problems immediately emerge. For example, it is apparent that the nature of the mining enterprise in this specific area differed considerably from that found in other portions of the California Desert, and that this difference may be indicative of regional variability in capitalist expansion and development within the far west. In the Golden Queen area, mining was clearly undertaken as a serious extractive enterprise, with the mines relatively long-lived, and the development of a large residential community nearby. In contrast, precious metal "mining" in the Death Valley region was characterized by the use of fictive or near-fictive mining properties to manipulate and exploit the New York stock-market; what was mined were the investors' pocket-books more than valuable ore deposits (e.g., see Lingenfelter 1986).

2.0

ARCHIVAL RECORDS SEARCH

The background research for the Golden Queen inventory required two kinds of archival research. First, in order to develop an adequate understanding of the documented history of the study area, published and unpublished maps, documents and records were examined at the Kern County Recorder's Office, the UCLA Earth and Space Sciences Library, and the BLM offices in Bakersfield and Ridgecrest. These sources provided data in the form of mineral claim, sales and patent documents on the property, period newspaper articles on mining activities at these mines and in the region generally and, through the assistance of Larry Vredenburg, the Gerner photo collection of the property, which consists of a series of black and white pictures of the mines and residential areas taken about 1903 - 1904 on Soledad Mountain. The information taken from these sources has been summarized in the historical background presented above. The second type of archival review concerns a study of the archaeological site records, maps and files housed at the California Archaeological Inventory, Southern San Joaquin Valley Archaeological Information Center (AIC), at California State University, Bakersfield.

An archaeological records search was conducted by AIC staff to determine whether the study area had been previously surveyed by archaeologists, and whether any archaeological sites had been previously recorded on it. The complete results of this records search are included as Appendix A to this report.

Based on AIC files, the Golden Queen study area had never been systematically surveyed by archaeologists in its entirety. Two sites had, however, been recorded on the property, both of which are located on the western side of the study area, and both of which were recorded by the BLM in 1977. The first of these, designated CA-KER-764H, was recorded as a small historical mining locality consisting of a cobble structure, prospect and adit. Although determined not eligible to the National Register of Historic Places (NRHP) on its own merits, it was believed to be a potential contributor to a NRHP district, given the additional historical mining remains in the area. The second site, CA-KER-765, was recorded as an isolated grinding slick and was determined not eligible to the NRHP at the time of discovery.

3.0

FIELD METHODS

3.1 Field Methods

Field methods employed during the Class III inventory of the Golden Queen study area were designed to obtain complete (100%) survey coverage of the study area. They included intensive, on-foot examination of the groundsurface of the study area; the identification and location of discovered sites and relocation of known sites; tabulation and recording of surface diagnostic artifacts; site mapping, using Brunton compass, surveyor's tape, transit and stadia, and a Magellan Pathfinder GPS, as appropriate in each case; limited subsurface probing; preliminary evaluation of site integrity; site recording, using established procedures and forms (see Office of Historic Preservation 1986); and photographic recording.

Limited subsurface probing was undertaken using shovel test pits (STPs). These were hand-excavated with a round-point shovel, with removed dirt screened with 1/8th inch mesh. This effort was intended to serve in a presence-absence capacity only; that is, to determine whether subsurface archaeological deposits were present on the sites. Any identified subsurface remains, accordingly, were to be tagged and bagged and reburied within the back-filled test pit, after recording. One STP was excavated at each major feature of each site identified during the survey. No collection of archaeological remains of any kind was made during the inventory.

Because the study area contains considerable topographic variability, different surveying strategies were employed during the inventory. In the areas of flat terrain to moderate slopes (typically on the northern and western side of the study area), the groundsurface was examined with the crew spaced at approximate 10 - 15 meter intervals, walking transects across the study area to identify artifacts or other archaeological indicators that might be present on the groundsurface. Ridge lines were covered in a similar manner. Steep slopes (generally exceeding the angle of repose), which comprised eastern two sections of the study area, were covered by crew-members walking zigzag transects that traversed the slope faces.

In all cases, special attention was paid to depositional environments, such as saddles, swales and toe slopes, where the likelihood of archaeological preservation is enhanced. Further, rock faces, amenable for the creation of rock art or providing locales for rhyolite quarries, and rock shelters, usable for prehistoric habitation, were carefully examined as high likelihood spots for the presence of prehistoric archaeological remains. And, with regard to historical resources, particular attention was paid to the identification of potential trash dumps and privy locales.

3.2 Field Conditions

Field conditions for the Class III inventory of the Golden Queen study area were, in general, good as regards groundsurface visibility and therefore the ease of site recognition. Vegetative cover varied from moderate to sparse, in areas of flat to moderate slope, to non-existent, on cliff faces, bedrock outcrops and scree slopes, with only a few exceptions (these

exceptions have been noted on the site descriptions provided below). Furthermore, archaeological sites within the study area tended to be historical, thus containing structural remains, which were themselves easy to recognize, and the sites tended to cover relatively large areas, further facilitating site recognition. On the other hand, the extreme slope of portions of the study area made surveying difficult, if not outright dangerous, in some areas.

4.0

SURVEY RESULTS

4.1 Introduction

The field survey of the Golden Queen study area resulted in the relocation of two previously recorded archaeological sites, and the discovery and recording of two new site localities, each of which consists of a series of relatively discrete mining features. With the exception of one of the previously recorded sites, all of these are historical (Euro-American) in age and are a product of the mining history of the property. We discuss these sites in turn below; site records and updates are provided in Appendix B of this report.

4.2 Previously Recorded Sites

Two sites had been previously recorded within the study area: CA-KER-764H and -765. Both sites were relocated and evaluated during the current field survey.

4.21 CA-KER-764H

This historical site is located on the west side of the study area near the western edge of Section 6 (see Figure 3), on the south side of an E-W trending minor ridge line. It was first discovered and recorded for the

BLM in 1977 by Eric Montizambert and Garth Portillo, and was said to consist of a cobble structure/structure foundation, a prospect cut, and a vertical shaft. Although noted as not being eligible for the National Register of Historic Places (NRHP) alone, it was suggested at the time of recording that the site might contribute to a historical district (see Appendix B).

The site was relocated and an assessment was made of it during the 1995 field study. It was found to be largely intact as described in the 1977 site record, with its condition estimated as moderate, in that the cobble walls are partly collapsed, and the eastern side of the site is rapidly filling with colluvium.

The site consists of two large, unmortared fieldstone cobble wall remnants, situated perpendicular across two small, intersecting arroyo/drainages (Figure 4). The downstream (western) wall is currently the largest, measuring about five feet in height by two feet wide, by 43 feet long. The upstream (eastern) wall, which cuts across a smaller intersecting drainage, averages three feet high by two feet wide, and is 28 feet long. Both walls are slightly bowed in the upstream direction. An old dirt road runs perpendicular to the arroyos, immediately south of these cobble walls.

The location of the "structure" across a small arroyo is problematic. Although this feature resembles other living structures found elsewhere on Soledad Mountain in construction techniques, its large size, the absence of any evidence for roofing, and its location in an arroyo suggest that it served as a check-dam or water control feature (such as a small water retention basin) for the arroyo, rather than a living structure. Another,

smaller single cobble wall was noted about 20 m downstream of the first, supporting the interpretation of these features as water retention structures. Furthermore, STPs failed to reveal any evidence of habitation debris at the location of these wall features.

In addition to the structural features noted at the time of discovery, we also observed a small tin can scatter/dump approximately 20 m W (downstream) of the primary cobble structure/structure foundation, within the arroyo itself. This contained hole-in-top cans, purple glass and a metal satchel frame. It is relatively small in size (containing less than 25 historical artifacts) and appears to be turn-of-the-century or early 20th century (pre-1920) in age; however, none are temporally diagnostic in any narrow sense. Currently, it is impossible to confidently associate these surface artifacts with the cobble wall features. The putative vertical shaft and cut associated with this site, however, are clearly recent in age, at least judging from the associated remains, which are modern timbers, nuts and bolts, and so on.

In summary, CA-KER-764H does not appear to be an historical mining structure, in the sense of cabin or building, but instead most likely served as a water control feature within an arroyo. It is of unknown historical age, and is not associated with any other historical remains which would clarify its function and age, or provide a context for better understanding its intended use.

4.22 CA-KER-765

Located on the north side of the same minor (E-W) ridge containing CA-KER-764H (Figure 3), this site too was recorded for the BLM by Montizambert and Portillo in 1977. It was said to consist of a single bedrock grinding slick measuring 8 cm in diameter by about 1 cm in depth, on a boulder roughly 2 by 3 feet in size. At the time of BLM recording, it was determined not eligible to the NRHP (see site record form, CA-KER-765; Appendix B).

The putative isolated grinding slick was relocated during the 1995 field study using the site location map, verbal description of this feature, and a photograph of it included with the site record. Based on a careful visual examination of this boulder, we do not believe it to be an aboriginal grinding slick, but instead interpret it as a natural depression on a relatively flat boulder surface. That is, we believe that CA-KER-765 is not an archaeological site, but simply a natural rock feature similar in cursory examination to a grinding slick.

4.3 Newly Discovered Sites

As was expected, given the mining history of the study area documented above, a series of mining features were discovered and recorded during the 1995 field survey. These fall within two portions of the study area, both of which are located in the western study section which, as the

historical accounts indicate, was one of the foci of mining activity on Soledad Mountain. In contrast, the eastern and southeastern sections of the study area, located in steep terrain high on Soledad Mountain, were both devoid of archaeological remains, and are unmentioned in the historical accounts and documents.

Because of the complexity and ambiguity of these mining features (in terms of history of ownership and period[s] of use and reuse), we initially recorded all of them, regardless of age. Moreover, we have grouped the different features into two clerical "sites", which are based on geographical clustering. That is, at this point in our understanding of these historical cultural resources, these "sites" should not be taken to necessarily represent functionally related units (though in one of the cases they clearly were) so much as mining features and remains in locational proximity. We describe these sites below, with site records provided in Appendix B.

4.31 Elephant-Eagle Mine (CA-KER-4455H)

A large archaeological site, representing the remnants of the Elephant-Eagle Mill and Mine, was recorded in the northwestern portion of the study area (see Figure 3). We have provided a sketch of the respective features present within this site (Figure 5), as well as more detailed drawings of the extant remains of the mill, per se (Figure 6). This site, which has been designated CA-KER-4455H, covers an area estimated at 100 m N-S by 120 m E-W, or 12,000 square meters in size. However, most of this area is devoid of intact archaeological remains, with this large area simply

representing the zone encompassing a series of functionally related but discrete features. Note that a 1936 plat of the site exists (Figure 2). This provides locations of structures present over 60 years ago, and thus useful information in evaluating the current status of the site.

We have listed the various features (not all of which, incidentally, are archaeological, but including some of the recent mining remains as well) in Table 1. These can be described as follows, with numbers referring to Table 1 and Figure 5:

Metal buildings and assay dump (#1, 5 & 8) - Two modern metal buildings are present within the site area (Figure 7). One (#1) is immediately adjacent to or on the location of the 1936 plat mapped "Office Building" (Figure 2). The other (#5) is downslope from #1 and immediately adjacent to a concrete foundation that is not on the 1936 plat, therefore presumably post-dating it. Feature #1, the building near or on the 1936 plat Office Building location, is adjacent to the haulage level adit, with a vertical shaft and the remnants of a small shaft collar and head frame located about 20 m uphill. This modern building sits on a concrete slab floor. There are no clear remains present from the original 1936 Office Building; it is possible that they were destroyed by the construction of this modern building, which is made of corrugated iron and appears quite recent in age. However, a small wooden machine foundation is located immediately across (E) the dirt road from the metal shack. Although the location of this foundation on the east side of the dirt road does not match the location on the 1936 plat, it is also possible that this is the foundation for the original office building.

Feature #5, the lower modern metal building, is a corrugated iron shack with wood floor, resting on an unmortared cobble, cripple-wall foundation. The foundational remains alongside (west of) this structure is concrete with exposed foundation bolts, and appears both modern and to have held a structure that burned. Immediately across (NE) a dirt road from this foundation, trailing down a steep slope, is a dump of modern assay debris (8), suggesting that the building served as an assay office. This dump contains modern screw top glass bottles, modern one-gallon paint cans, and a large number of ceramic crucibles bearing the printed basal stamp "DENVER FIRE CLAY COMPANY" over "30" over "GRAMS" over "USA".

Ore chutes and gyratory crusher (#2 and 9) - Five separate ore chutes are present within the site. Three of these are truck chutes; that is, they are made to load ore onto trucks, and thus presumably post-date the Depression era mill. One of these three is a double-bin chute; the remaining two are both single-bin chutes. A large double-bin chute and short, collapsing trestle are also located immediately alongside and uphill (SW) of the mill remnants (#3), and would have fed into the mill, per se (though, as discussed below, this current mill structure is modern). Finally, a small single-bin ore chute is associated with the gyratory crusher (#9), which is located on the NE side of the site, outside of the mill area, per se. This crusher is labeled "WW GIBSON PATENTED", and is mounted in a wooden frame (Figures 8a and 8b). This is apparently not the gyratory crusher installed at the mine circa 1930, which was described by Tucker (1935:473) as a Gates crusher. Therefore it and its chute are either unrelated to the mill remains, per se, or were brought-in subsequent to the 1935 description of the mine.

Regardless of the precise origin of this artifact, gyratory or spindle crushers were used for the rough or preliminary breaking of ores, essentially maintaining the same function as jaw crushers (Richards 1909:27-28). As described by Peele (1941:28-04), they consist of "a fixed crushing surface, in form of a frustum of an inverted cone, around the axis of which gyrates a movable crushing surface, having the shape of a conical frustum in erect position"; stated another way, they are analogous to a large mechanical mortar and pestle, with the breaking action due to the rolling of the pestle along the inside edge of the mortar bowl, rather than due to stamping the end of the pestle into the pit of the mortar. As a device intended for the preliminary breaking of ore, the gyratory crusher would logically be positioned at the top of a mill, usually where ore was unloaded from the haulage level carts or trams.

With the exception of the small chute associated with the crusher, all of the ore chutes are made of salvaged wood, therefore post-date the 1930s mill and, in some cases, show evidence of burning, suggesting that they may have been salvaged from the remnants of the mill, which burned sometime after 1936. Furthermore, with the exceptions of the collapsing, double-bin truck ore chute and the double-bin chutes leading directly to the mill, none of the existing chutes are positioned in such a way that they could have been used in a logical ore materials flow that would have led to a preliminary ore crusher when positioned at the top of the mill, therefore demonstrating that they post-date the Depression era mill works.

Mill foundations (#3) - The primary archaeological remains present at this site consist of the Depression era mill foundations (Figures 6, 9a, 9b, 10a, 10b), which cover an area approximately 90 feet N-S by 175 E-W, as

measured below the collapsing trestle and double-bin ore chute made of salvaged wood, noted above. In order to understand the mill foundation remnants, it is appropriate to review in detail a period description of the engineering works and materials flow of this mill:

"Ore from mine delivered to 50-ton ore bin. Ore passed over one-inch grizzly; oversize from grizzly to Gates D. gyratory crusher; crushed to pass 3/4" ring; from crusher elevated by bucket elevator to 50-ton fine ore bin; from ore bin fed by Gates feeders to belt feeder to 4 ft. by 8 ft. Marathon rod mill which is in closed circuit with Dorr duplex classifier. Discharge from rod mill goes to amalgamation trap, with 5 lb. of mercury in bottom of trap. The trap is lined with amalgamation plates. Overflow from trap to launder lined with English corduroy cloth, to classifier. The pulp is ground in cyanide solution to 48-mesh; 2 lb. of cyanide per ton of solution; overflow from Dorr classifier to 2 launders 6 ft. in length by 8 inches wide, lined with English corduroy cloth; combined product from Dorr classifier through launders to 2 drag classifiers, 16 ft. in length by 2 ft. in depth; overflow from No. 1 drag classifier [sic] to No. 2 drag classifier. The drag classifiers separate sand from slimes. Slimes flow to three 8 ft. by 12 ft. agitators, then pulp from agitators to 30 ft. by 8 ft. Dorr settling tank; then to two 4 ft. by 8 ft. agitators; then to 30 ft. by 12 ft. solution tank. Pregnant solution pumped to gold solution tank in mill, made up of 3-compartments with burlap filtering cloth. Pregnant solution flows to 3 sets of 6-compartment zinc boxes. Contact with solution takes 72 hours. Sands from drag classifiers to four 8 ft. by 12 ft. circular sand vats and then to four 30 ft. long by 16 ft. wide by 8

ft. deep sand vats. Solution from sand vats to solution tank, from which it is pumped back to gold solution tank in mill, then to zinc boxes. Slimes dewatered with Oliver filter. English gold-cloth concentrate cleaned up each 8-hr. run. Concentrates go to amalgamation barrel and tails from amalgamation barrel returned to rod mill. Plant has a capacity of 50 tons per 24 hours.

(Tucker 1935:473-474)

Extant remains of this mill can be summarized as consisting of three concentration of foundations: (a) three terraced areas, the upper two of which are concrete floored, and which apparently contained essentially all of the mill works above the circular and rectangular sand vats described above; (b) the sand vats themselves; and (c) a lower area containing a concrete machine room foundation and miscellaneous tank foundations.

(a) Upper terraces area: At the top or uphill (W) side of the mill, immediately below the modern double-bin ore chute and trestle, is a concrete foundation and pad measuring 14 feet (E-W) by 90 feet (N-S). A modern standing structure, consisting of wood frame and plywood siding and measuring 24.5 by 14 feet, has been built over a portion of this upper pad area (Figure 9a). This modern structure encompasses a series of concrete machine foundations which were part of the internal mill system. Charred mud seals along the northern side of the concrete pad indicates both that the original mill building was once much larger than the modern plywood structure, and that the mill building was burned at some point in the past. Portions of the northern side of this uppermost concrete pad, in the immediate area of the charred mud seals, are covered by waste rock dump which appears to relate to the modern double-bin ore chutes. This

provides further evidence both that this ore chute post-dates the Depression era mill, and that the burning of the mill occurred sometime before recent mining activities were undertaken at this locale.

A 4.5 feet drop to the east leads to the lower of the two concrete terraces or pads. This pad is 23 feet wide (E-W) by 75 feet long (N-S). It contains three raised-up concrete machine foundations in its southern-central half. Most likely, this and the upper concrete pad were once enclosed within a single building.

The third pad is a dirt-floored terrace, eight feet lower than the second pad. It is 20 feet wide and contains two 12 feet long troughs, which are four feet and three feet wide, respectively, at its northern end. This terrace currently contains a series of modern water tanks.

(b) Sand vat area: Five feet below the dirt pad are the remnants of the sand vats, both circular and rectangular (Figures 9a and 9b). The four metal tanks currently consist of foundations, concrete floors within the tanks, and small remnants (circa 3 inches high) of the tank walls, which were originally 8 feet high. According to Mrs. Meehl (personal communication, 1995), all of the metal tanks on Soledad Mountain were cut apart and reused by cattle ranchers as watering troughs, following the Depression.

The four rectangular sand vats are concrete and V-bottomed, and currently lack their sidewalls, which were also originally eight feet high. There is no existing evidence to indicate whether these sidewalls were metal or wood. Note that our measurements for the sand vats differ slightly from those

provided in Tucker's 1935 description. Most likely, these reflect different measuring strategies; that is, Tucker's published dimensions probably represent the inside dimensions of these features, whereas we have necessarily measured overall (outside) sizes.

The basal remnants of two, six feet diameter metal tanks are also present immediately north of the rectangular sand vat remnants. To the north of these small tank remnants is a large circular and depressed area, measuring 54 feet across, which may have been a large tank pad. Another smaller (6 feet diameter) tank base is present immediately east of this large area.

(c) Lower foundations area: Northeast of the sand vats are a series of smaller foundations and miscellaneous mill remnants. These include the basal remnants of four metal tanks, the sides of all of which, again, were cut-off for salvage. Two of these tanks are six feet in diameter; one is three feet across; and the fourth, which is about 42 feet north of the tanks, is 15 feet in diameter. About 40 feet northeast of the northeast extreme of the sand vats is an anomalous feature consisting of three cement-mortared retaining walls made of undressed fieldstones (Figure 10a). These are aligned in a row, and are semi-circular or lobate in shape, but are each separated by a space five feet wide. These appear to have served as some kind of tank foundations or abutments serving as erosion or run-off control features.

About 4.5 feet east of these stone walls is a concrete machine room foundation and back wall (Figure 10b). This measures 30 feet N-S by 11'2" feet E-W. Foundation bolts for at least two large machines and one

concrete machine stanchion/support are present within this room area. A small amount of mill tailings are present below these lower features.

With the exception of the sand vats, noted above, the mill remains are too fragmentary to allow an identification of the function of any particular features still present on the site.

However, the absence of any substantial evidence for tailings, even given the alleged claim that the tailings were at one point rerun, makes the putative production of this mill suspect: as apparently laid-out, had any significant period of mill operation occurred, the tailings would have quickly inundated the habitation area, which was immediately below. Furthermore, the use of a roller mill seems inappropriate for a gold mill interested in productive yield. As noted by Richards (1909:47), "In crushing native gold ore by rolls the gold fails to be brightened preparatory to final amalgamation, the thin flakes fail to be broken up preparatory to concentration, and finally it is difficult to reduce the ore to a sufficiently fine state to liberate the gold. Rolls, therefore, do not favor for crushing preparatory to amalgamation". When combined with the evidence cited by Tucker (1935) that a number of lessees worked portions of the Elephant-Eagle Group claims during the Depression, one is led to speculate that the mill functioned primarily as a custom mill for purposes of running the lessees ore.

Boarding house pad (#4) - As noted above, a 1936 plat of the property exists (Figure 2), which illustrates the location of a number of structures and buildings to the east of and downhill from the mill structure, per se. None of these are currently standing. Using a transit and

stadia, however, we attempted to relocate these various structures on the ground. They all fall within an area of intensive, modern use, which has involved the construction of a series of recent buildings and trailers, bulldozing and widening of dirt roads, and the dumping of modern trash in a series of dumps along the dirt roads. As is quite clear from the remains on the ground, this portion of CA-KER-4455H was used for a post-war homestead(s), and has suffered considerably as a result.

The only extant archaeological remains of the buildings identified on the 1936 plat, in fact, is the dirt pad of a structure identified on the plat as the "Boarding House". According to residents of the local area, a wood structure was present at this location, which burned down within the last ten years. Subsequently (or perhaps at the time of the fire), the pad area was bulldozed and a backhoe trench dug into it, which has been used for modern trash disposal. With the exception of small fragments of burnt timbers and nails, there are no extant archaeological remains of this structure.

What apparently would have comprised the habitation area of the Elephant-Eagle mill and mine, accordingly, has been destroyed by subsequent reuse and development of the property. Although there is a significant amount of material culture debris in this area, this is essentially all modern trash. With the exception of occasional and sporadic examples of historical artifacts, such as purple bottle glass, we found no evidence for intact historical deposits or features in this area.

Upper concrete foundations (#7) - An upper area of machine room foundations is also present (Figure 11), above the haulage level adit. This

measures 22'2" (N-S) by 23' (E-W), and is located 24 feet west of the vertical shaft and collar/head frame remnant leading down to the haulage level. The feature consists of three raised concrete machine stanchions/foundations, sitting on a concrete floor. The overall configuration of the lay-out of these stanchions is not suggestive of an enclosed structure, and no wall footings or foundation bolts are present within the concrete floorings. However, there is substantial evidence for burning at this location (burnt timbers, charcoal, nails, etc.), suggesting that a structure or at least cover of some sort may have once stood at this location. Furthermore, the 1936 plat of the property (Figure 2) shows a rectangular building in this location, indicating both that portions of this structure may have been dirt floored, and that it is minimally Depression era in age.

In the southwestern corner of this concrete feature the remnants of what appears to have been a generator are present. Otherwise, this feature appears to have served as a compressor room. With the exception of broken glass, nails and charred wood, this area of the site has few surface artifacts. It most likely burned at the same time as the mill itself.

4.32 Bobtail Area Features (CA-KER-4454H)

A series of dispersed mining features was identified in the general vicinity of the Bobtail Mine and claims, which is to say the western side of Soledad Mountain (Figure 12). These have been summarized in Table 1. They are found in an area measuring about 500 meters E-W by 500 meters N-S, for

a surface area of 25,000 square meters. However, because each feature is quite discrete, with all archaeological remains then very localized, the large majority of this area contains no archaeological remains of any kind. Furthermore, not all of these features fall within the Class III inventory study area, as noted below, nor are all of them truly archaeological, in terms of the fifty year age criterion; instead, they simply reflect all of the extant mining features on the western side of Soledad Mountain. We discuss each of the features that constitute site CA-KER-4454H in turn.

Feature #B1 - This is a small concrete pad, measuring 15'6" (E-W) by 14'6" (N-S), which abuts a low unfinished mortared cobble wall to the west that is 12 feet long (Figure 13). A terraced pad edged by a single coarse of field cobbles lies to the northwest of the concrete pad, and measures 18' by 18'. The concrete pad was formed with modern lumber.

This structure is associated with an extensive but very low density can dump, which extends northwestward down a small drainage for about 200 meters. This contains a mixture of mostly Depression era or later (sanitary seal cans, crown top beer cans) and some earlier (hole-in-top cans, crazed whiteware) remains; that is, it appears to be chronologically-mixed, and currently is being transported downslope in the small arroyo. One of the pieces of whiteware has a green printed maker's mark. This is "U.P.W." over over a bird with an "S" in its beak. This was produced by the Union Porcelain Works of Greenpoint, New York, which was owned by Thomas C. Smith and Sons. The Union Porcelain Works was in production from circa 1860 to 1904 (DeBolt 1988:72). The mark in question is a post-1877 mark, perhaps dating between 1877 - 1879, but definitely before 1905. It is consistent with a turn-of-the-century age of initial occupation for this

small feature. A shovel test pit in this location failed to reveal evidence of any subsurface deposition at this locale.

Features #B2a and B2b - These consist of two truck ore chutes, and associated ramps and adits. The B2a single-bin ore chute is intact and is made with a series of galvanized bolts and modern lumber (Figures 14a and 14b); that is, it does not appear to be scavenged material. An older waste rock pile was dug-out to accommodate this ore chute, indicating that it post-dates the original workings at this location.

A concrete motor stanchion/foundation (air compressor or winch?) is also present on the ore ramp, with another immediately to the north of the portal to the adit. A small dump of burned modern debris is present down one side of the ore ramp. All of the remains here are essentially modern in age, including aerosol spray cans, which post-date World War II. Feature B2a is clearly post-war in age.

Feature B2b, located a few hundred yards up (north) a dirt road from B2a, is a second single-bin truck ore chute (Figure 15), associated with a haulage level adit containing narrow gauge rail tracks and an open stope at a slightly higher elevation. The ore chute itself measures 20 feet long (E-W) by 6'6" wide (N-S), and has a maximum height, at its outside edge, of 10 feet. Remnants of a wooden trestle system, consisting of paired upright wooden pillars and two wooden rails, are present in the waste rock dump between the chute and the adit. The ore chute is made of scavenged wood, as indicated by the varied sizes of the lumber and the evidence for earlier cuts and attachment holes in the boards, and is partly collapsing.

A very small, low density dump of Depression era remains, consisting of sanitary seal cans and crown top beer cans, is present in a very small, steeply-sided drainage immediately north of the chute. Another set of wooden trestle remnants is located in the waste rock dump on the north side of this small drainage.

As noted above, narrow gauge tracks are present in the adit, the collar of which is 73 feet east of the trestle. A sheet metal, two-burner stove is located at the entrance to the adit. A metal hoist gear and motor mount are also located up slope and north of the adit. Further up slope of this artifact was the remnant of a hoist pulley. This is made of wood and metal and consists of two wooden wheel pulleys on a wooden axle, with metal fittings, and leather bearings on the axle. The smaller pulley, about 20" diameter, was a brake operated with a metal band and fittings; the larger pulley, about 3' diameter, appears to have served for a 3" belt, and is too small for a hoist cable. This pulley system is not associated with any other features and its current location on a steep slope is anomalous; most likely, it was simply dropped at this location while in transport on the hillside.

Features B2a and B2b, in other words, consist of a mix of modern and Depression era remains, which have disturbed earlier mining works at this same location.

Feature #B3 - This feature consists of a series of four adits, a haulage ramp trestle, two cleared pads, a collapsing wooden landing/loading dock, and a tin can scatter, all of which appear to be modern (post-World War II) in age. Narrow gauge rail lines are present in the lower of the three adits, which step-up the side of the slope for about

35 meters. The haulage ramp includes a wooden bridge/trestle extending from the portal of the lower adit to a raised hillock of waste country rock, creating a truck loading area under the trestle. It is made of scavenged wood lumber, 2x4s and plywood, demonstrating recency in age, and has been vandalized by recent spray-paint graffiti ("CAMP MOSH"). It is 23'6" across and 8' wide, with hand-rails made of 2x4s. Two pads are present to the north of this ramp. One, immediately to the north, appears to be a dug-out loading ramp. The second is a leveled pad slightly to the north, and below, the lowest adit.

A collapsing wooden landing or loading dock, apparently set-up for a truck, is located up slope (E/SE) of the haulage ramp trestle, and is associated with a second adit. This dock measures 11 feet (N-S) by five feet (E-W). A large metal barrel/funnel is located at the mouth of the adit at this location.

Finally, a small tin can scatter, containing sanitary seal cans, is present to the west of the trestle haulage ramp. These are modern in age. The various components of Feature B3, in other words, appear to consist entirely of modern or post-World War II era remains, and are not depicted on a 1942 plat map which covers claims in this area (see Figure 17).

Feature #B4 (Figure 16) - This is a small concrete building, on a raised concrete foundation. It was built with concrete forms for the interior walls and faced with field cobbles on the exterior, and has a concrete floor but currently no roof. It measures 23 feet (E-W) by 20 feet (N-S), was gable-fronted, and had a roof height of only eight feet from the

concrete floor. A smaller interior rectangular room, measuring 10 feet (N-S) by 12 feet (E-W), was created with wooden plates and presumably wooden walls (now missing), creating a large L-shaped room out of the remainder of the structure. The structure had doors on the east and west (gabled) ends, three windows on the north wall, two on the east, and two on the south. Lintels of the doors and windows are cut and milled lumber. A hearth/fireplace, made of mortared fieldstone, is present in the southeast corner of the structure.

On the western side of the structure a single door leads down a step to a partially enclosed room, perhaps a covered garage. It measures 8'4" (E-W) wide and, like the structure, per se, is 20 feet (N-S) long. It has no north wall but instead abuts the remnants of a dirt road on this side. Nonetheless, the west (exterior) wall of this addition is gabled to match the heart of the structure, and windows are present on the west and south walls. The floor of this addition is concrete poured on dirt; that is, it has no foundation, per se.

A dug-out "loading ramp" or parking area is located 18 feet to the west of this structure. It is 25 feet (N-S) and 30 feet (E-W), opening to the west onto a dirt road, while an unmortared fieldstone "retaining" wall (3' high by 2' wide maximum) makes up the north, east and south walls of this feature. A staked NW corner-marker for the Hope Extension claim, one of the Golden Queen Mine Depression era claims, is located immediately north of the northwest corner of this dug-out area.

A small quantity of sanitary seal cans, wire and Depression era car parts are present scattered in and around this structure, including "Quaker State

Extra Lite" oil cans. No evidence of dumps, in the sense of concentrations of remains, or privies were found, and shovel test pitting revealed no evidence of subsurface remains at this locale.

The structure is depicted on Mineral Survey 6299 (Figure 17) as a "stone cabin", which was mapped between October and December, 1942, confirming that it is Depression era in age. Architecturally speaking, it is in poor condition.

Other features at CA-KER-4454H - In addition to the features described above, three other feature complexes were recorded as part of the Bobtail Area site. These include another single-bin truck ore-chute (B5); the foundations of the Soledad Extension haulage-level machine room/changing house (B6); a small, unmortared stone structure (B7); and a small head frame/hoist (B8). All of these fall outside of the Class III inventory study area; moreover B5 and B8 appear to be modern; B6 dates to the late 1930s and early 1940s, when the Golden Queen Mine was in operation; while B7 has no associated artifacts and is of unknown age and affiliation, although a turn-of-the-century age is most likely, given its construction techniques. As is clear, these various features and feature complexes that compose CA-KER-4454H are by no means necessarily related in temporal or functional terms, but have been grouped together because of their general geographical proximity.

5.0

SUMMARY AND RECOMMENDATIONS

5.1 Summary

A Class III inventory was conducted for the Golden Queen Mine project on BLM administered lands located on the northern and western sides of Soledad Mountain, near Mojave, Kern County, California. This involved a background record and documents search intended to provide a detailed understanding of the history and prehistory of this area; discussions with local residents about the history of the area; a continuous intensive (100%) surface survey of the entire study area; the recording of archaeological sites; and an evaluation of these sites, based on mapping, recording and limited subsurface probing, in order to determine their eligibility to the National Register of Historic Places (NRHP). The intensive survey was intended to field check previously recorded sites, as well as to identify and record sites that, heretofore, were unknown. The identification and recording of these sites was conducted per the guidelines in the Bureau of Land Management Manual (BLM 1988), and the "Secretary of the Interior's Standards and Guidelines, Archeology and Historic Preservation" (Federal Register 48(190):44716-44742; 29 September 1983).

The Class III inventory resulted in the reexamination of two previously recorded site on the property; and the discovery and recording of two historical archaeological sites. We summarize our findings and recommendations relative to each of these cultural resources below.

5.11 CA-KER-764H

First discovered in 1977 on the west side of Soledad Mountain, site CA-KER-764H was relocated and evaluated during the 1995 Class III inventory. It was determined to consist of an informal water retention/erosion control feature, consisting of three cobble walls crossing an arroyo. A small, low density dump of turn-of-the-century/early twentieth century tin cans is present between these cobble walls; whether these surface remains are temporally associated with the walls is unknown, and no other features or sites are clearly associated with or related to this site, functionally or temporally. It is currently filling with alluvium and colluvium being that is naturally transported down the arroyo, but contains no subsurface archaeological deposit.

5.12 CA-KER-765

Also first discovered in 1977 on the western slopes of Soledad Mountain, this site was recorded as an isolated prehistoric bedrock grinding feature. It was relocated in 1995 and determined to be natural rather than cultural in origin. That is, it does not constitute an archaeological site.

5.13 CA-KER-4455H

This is the Elephant-Eagle Mill and Mine, located near the northwestern

end of Soledad Mountain. Claims were first filed and therefore mining began at this location around 1900, with the first mill constructed at this spot in circa 1920. A second, more elaborate mill was put in at the same location during the 1930s, when the property was owned by Jesse Knight, father of Goodwin Knight, who was the governor of California during the 1950s. However, the mill was burned sometime after the Depression era, probably during the 1950s. Combined with continued use of the mill and surrounding areas into the present period, the result has been considerable disturbance and alteration of the groundsurface at this locale.

None of the original Depression era mill, office and habitation structures once on this site are currently standing. Currently, extant historical archaeological remains are limited to the foundations of the 1930s mill, consisting of concrete terraces, sand vats, and machine room and tank foundations, and a terraced pad that once contained a wooden boarding house. No subsurface archaeological deposits, such as privies, or intact surface features, such as dumps, furthermore, are present on the site.

5.14 CA-KER-4454H

This site consists of a series of dispersed mining features located on the west side of Soledad Mountain, within the area of the Bobtail claims. Although mining began on claims in this area of the mountain early in the century, it was never the focus of intensive mining activity and never had a mill or known resident population of any size. Instead, claims and veins worked in this area had the resulting ore transported to mills elsewhere on the mountain or region. Furthermore, like other portions of Soledad

Mountain, the Bobtail claims continued to be mined after the second World War, resulting in disturbances to the earlier mining remains.

Three features/feature complexes were identified within this site that are both historical in the sense of meeting the 50 year age criterion, and that fall within the boundaries of the Class III inventory (that is, we recorded all mining features on the western side of the mountain as discontinuous portions of this site, some of which proved to be modern in age, and some of which actually fall outside of the Class III study area). They include a small concrete pad, of unknown age, and a nearby, relatively small and low density tin can dump that is primarily Depression era, but contains some earlier remains, and which is being dispersed by alluvial wash; a Depression era single-bin truck ore chute, in association with a small quantity of mining remains of mixed ages; and the remains of a Depression era, two-room concrete structure. Note that these three features are dispersed across the site area; while they may in certain cases date to the same period (e.g., the Depression), they are in fact on different claims and are not functionally related in the sense of having been used by the same individuals or directed towards a single economic endeavor. Furthermore, none of these features/feature complexes have subsurface components.

5.2 Determination of Eligibility

Evaluation of the significance of the cultural resources identified during the Class III inventory of the Golden Queen project area, and a determination of the effect of the proposed project on these same resources, is based on an initial determination of eligibility of these

resources to the National Register of Historic Places (NRHP). Such a determination is based on the criteria required by and outlined in the National Historic Preservation Act, sec. 101 (a), and 36 Code of Federal Regulations Part 60.4, respectively. As so defined, a cultural property is eligible to the NRHP if it:

1. is at least 50 years in age;
2. retains integrity of location, design, setting, materials, feeling and association; and
3. has one or all of the following characteristics:
 - a. association with events that have made a significant contribution to the broad patterns of our history; or
 - b. association with the lives of persons significant in our past;or
 - c. embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction; or
 - d. has yielded, or may be likely to yield, information important to prehistory or history.

The baseline for criterion 3.d may generally be taken as existing regional research designs and problems, as discussed previously.

The effect of the proposed action on cultural resources is then defined by 36 Code of Federal Regulations Part 800.9. An action is said to have an effect on a property when the action may alter the characteristics of a significant property that qualified it for the NRHP. An adverse effect is one that diminishes a significant property's integrity through physical

destruction, damage or alteration; or alters or conflicts with the character of the property when such character is contributory to its inclusion in the NRHP. An action has no effect when the criterion of effect is not met.

5.21 CA-KER-764H

Site CA-KER-764H is a small, informal stonewall water control feature of unknown age and association. Though it probably meets the age criterion of 50 years and maintains a moderate degree of integrity, it does not meet any of the additional criteria. Because its temporal and functional associations cannot be determined, it cannot contribute to a historic district, and it has no potential to contribute to the resolution of regional research problems. It is thus not significant, and therefore is ineligible for inclusion in the NRHP.

5.22 CA-KER-765

The location recorded as site CA-KER-765 was determined to be non-cultural and is therefore not an archaeological site or cultural property. It is not, accordingly, significant nor eligible for inclusion in the NRHP.

5.23 CA-KER-4455H

This site consists of the remnant foundations of a Depression era mill and mine. Although it meets the criterion of age, it has no standing structures is therefore entirely lacking in integrity. Furthermore, it has no intact

archaeological deposits with research potential, and thus cannot measurably contribute to our understanding of California history. It is not significant and, accordingly, is not eligible to the NRHP.

5.23 CA-KER-4454H

This site consists of three geographically clustered but otherwise temporally and functionally unrelated mining features. Feature B1, a concrete pad of unknown age and a nearby possibly related, small can dump of mixed age, both probably meet the age criterion but are marginal with regards to integrity. More importantly, however, they meet none of the other criteria for inclusion in the NRHP. Feature 2b is a Depression era truck ore chute and, although eligible with regards to age, otherwise meets none of the criterion for eligibility. Feature B4 consists of the remnants of a Depression era cabin. While of sufficient age, it is entirely lacking in integrity, and does not satisfy any of the additional criteria. And because each of these individual archaeological features/feature complexes cannot be directly related to one another, or to other significant sites on Soledad Mountain, in terms of time period of use or specific use, they cannot be considered to constitute or to contribute to an historical district. Site CA-KER-4455H, and the archaeological features within it, therefore, are not significant and are not, correspondingly, eligible for inclusion in the NRHP.

5.3 Determination of Effect and Other Recommendations

The Class III inventory of the Golden Queen project area resulted in the

evaluation of four archaeological sites, CA-KER-764H, -765, -4455H and -4454H. Largely as a result of the long history of mining in this area, which has included active mining into the modern era, these sites have experienced almost continual disturbance and alteration. They are, accordingly, marginal or entirely lacking in integrity. Furthermore, they do not meet the other criteria for inclusion in the NRHP, as outlined in 36 CFR 60.4, and therefore are not significant cultural resources. Based on the criteria in 36 CFR 800.9, accordingly, any action undertaken within the Golden Queen project area, Kern County, California, is determined to have no effect upon cultural resources.

Although not required by law, and therefore not a condition upon which project approval may be based, it is nonetheless recommended that the gyratory crusher currently found at site CA-KER-4455H be removed from its current location and stored or displayed where it can be preserved. In essence a very large but still movable single artifact, it is neither unique or rare, but still constitutes an unusual and interesting material cultural artifact that is worthy of preservation.

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7.0
TABLES

List of Tables

- 1 - Features at the Elephant-Eagle and Bobtail Area sites

TABLE 1: Elephant-Eagle (CA-KER-4455H) and Bobtail Area (CA-KER-4454H), Archaeological Features

Elephant-Eagle

1	Metal building	Modern, adjacent to haulage adit/headframe
2	Ore chutes	Modern, re-used lumber
3	Mill foundations	Modern structure on machine room
4	Boarding house pad	Burnt & disturbed
5	Metal building	Modern, on cobble foundation
6	Concrete foundation	1930s office
7	Concrete foundations	Burnt structure, compressor room (?)
8	Assay dump	Modern
9	Gyratory crusher & chute	Outside of mill area; intrusive ?

Bobtail Area

B1	Pad, cobble wall & dump	Turn-of-century & depression era
B2a	Truck ore chute	Modern
B2b	Truck ore chute	Depression era or later
B3a	Adit and wood trestle	Modern
B3b	Wood landing/ramp	Modern
B4	Concrete structure	2 room, Depression era, no roof
B5	Ore chute, ramp and adit	Starlight (?)
B6	Soledad Ext Machine Rm Fdn	Concrete foundations; post-Depression + earlier remains
B7	Cobble structure	2x4 m, no roof, no artifacts
B8	Headframe on open cut	Deadman below using cable & 55 gal drums, modern

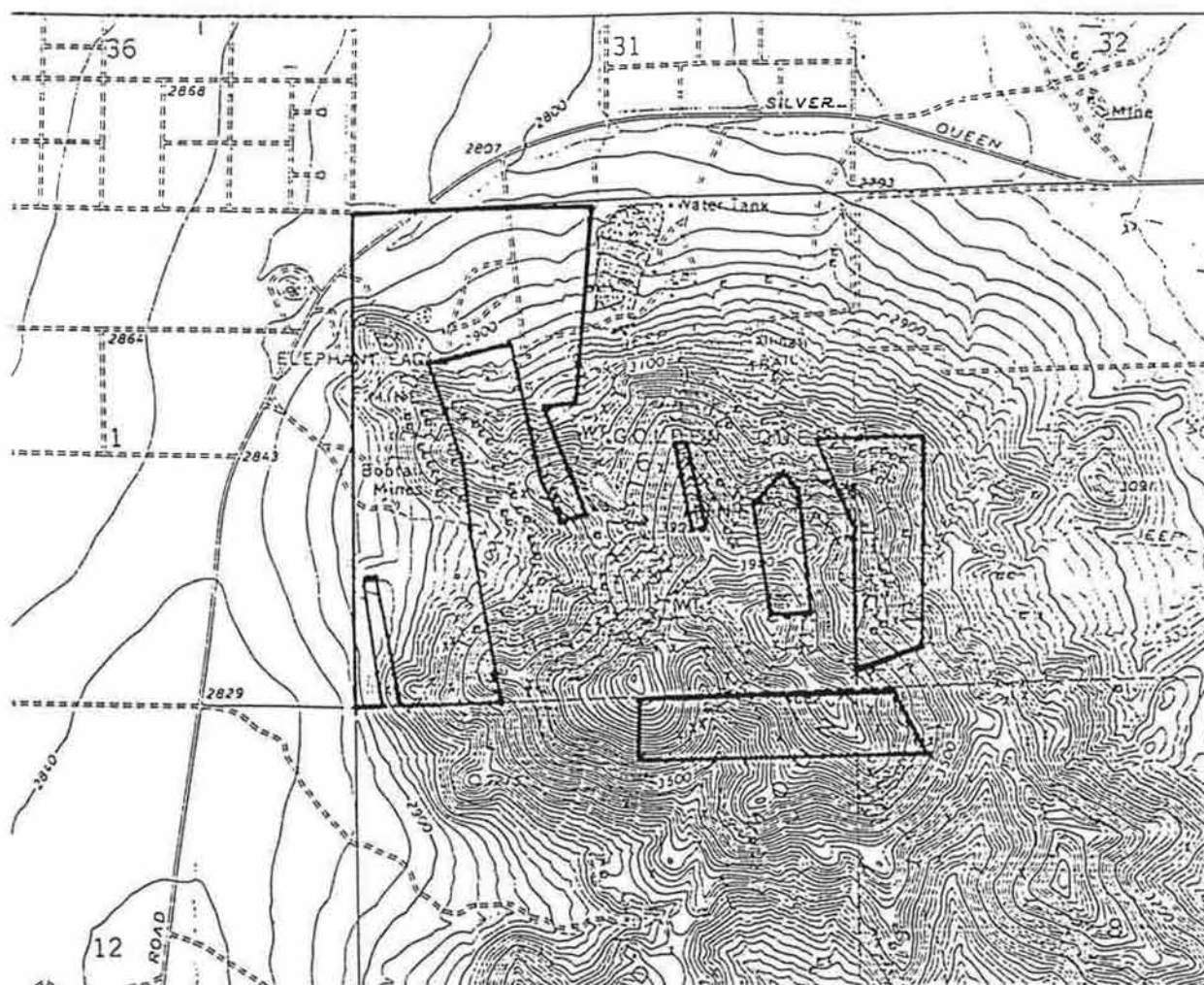


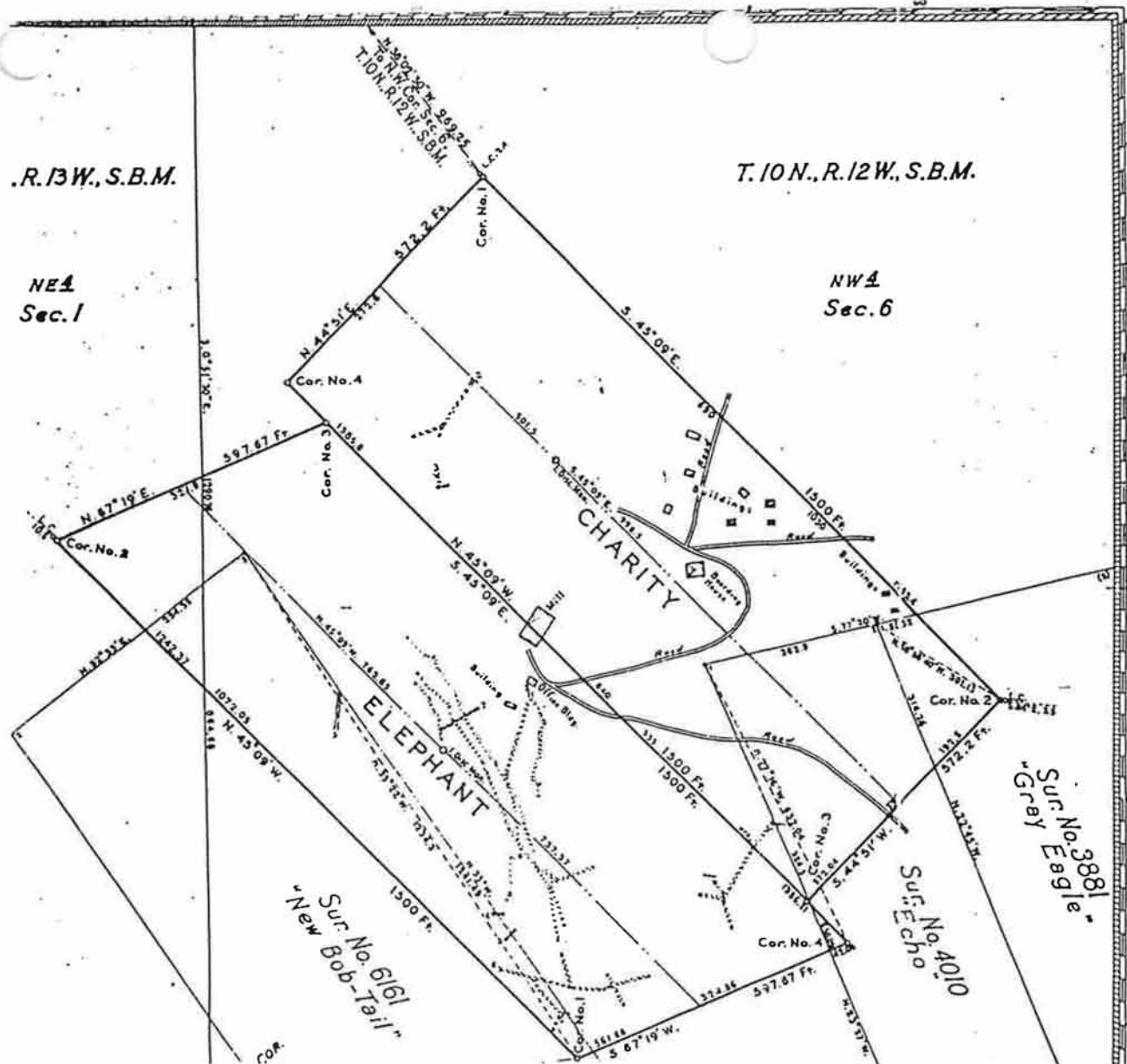
FIGURE 1: Class III Inventory study area, consisting of five discontinuous zones (outlined). Base map: Soledad Mountain 7.5 quadrangle; Scale - 1 : 2000.

R.13W., S.B.M.

NE 1
Sec. 1

T.10N., R.12W., S.B.M.

NW 1
Sec. 6



Mineral Survey No. 619

LOS ANGELES Land District.

PLAT

OF THE CLAIM OF
PAUL C. STAPLES.

KNOWN AS THE
CHARITY AND ELEPHANT LODES

IN MOJAVE MINING DISTRICT,
KERN COUNTY, CALIFORNIA

Containing an area of _____ acres.
Scale of 200 Feet to the inch.

Variation 16° 10' EAST
SURVEYED JULY 1 - OCTOBER 24, 1936 BY

C. A. LIDDELL, U.S. Mineral Surveyor.

The Original Field Notes of the Survey of the Mining Claim from which this plat has been made under my direction, have been examined and approved, and are on file in this Office, and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof. I further certify that Five Hundred Dollars worth of labor has been expended or improvements made upon, or for the benefit of, each location embraced in said mining claim by claimant.

PAUL C. STAPLES, or his grantees and that said improvements consist of 2 incline shafts; 1 incline shaft and drifts; 1 tunnel; 2 tunnels, and drifts; 1 tunnel, drifts and raise; 1 tunnel, winze and raise; and 1 open stope; Value, \$49,350.00.

that the location of said improvements is correctly shown upon this plat, and that no portion of or interest in said labor or improvements has been included in the estimate of expenditure upon any other claim. And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

Public Survey Office

John D. Adams

FIGURE 2: 1936 Mineral Survey Plat of the Elephant-Eagle site, showing structures then in existence. None of the structures on this plat are currently standing.

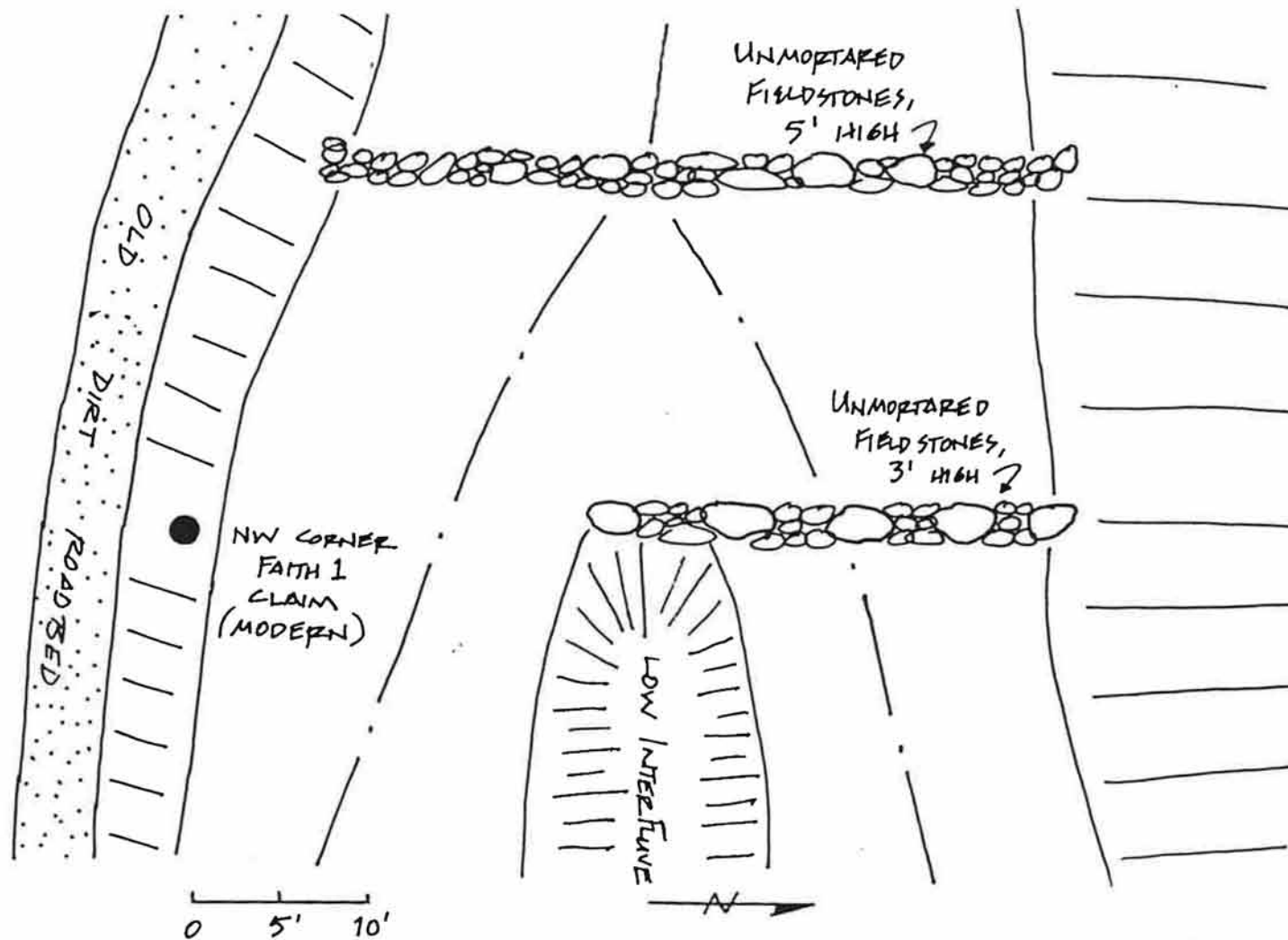


FIGURE 4: Sketch of cobble walls damming arroyos at CA-KER-764H.



FIGURE 5: The Elephant-Eagle site (CA-KER-4454H), showing the locations of the different features on the site. Scale - 1 : 400.

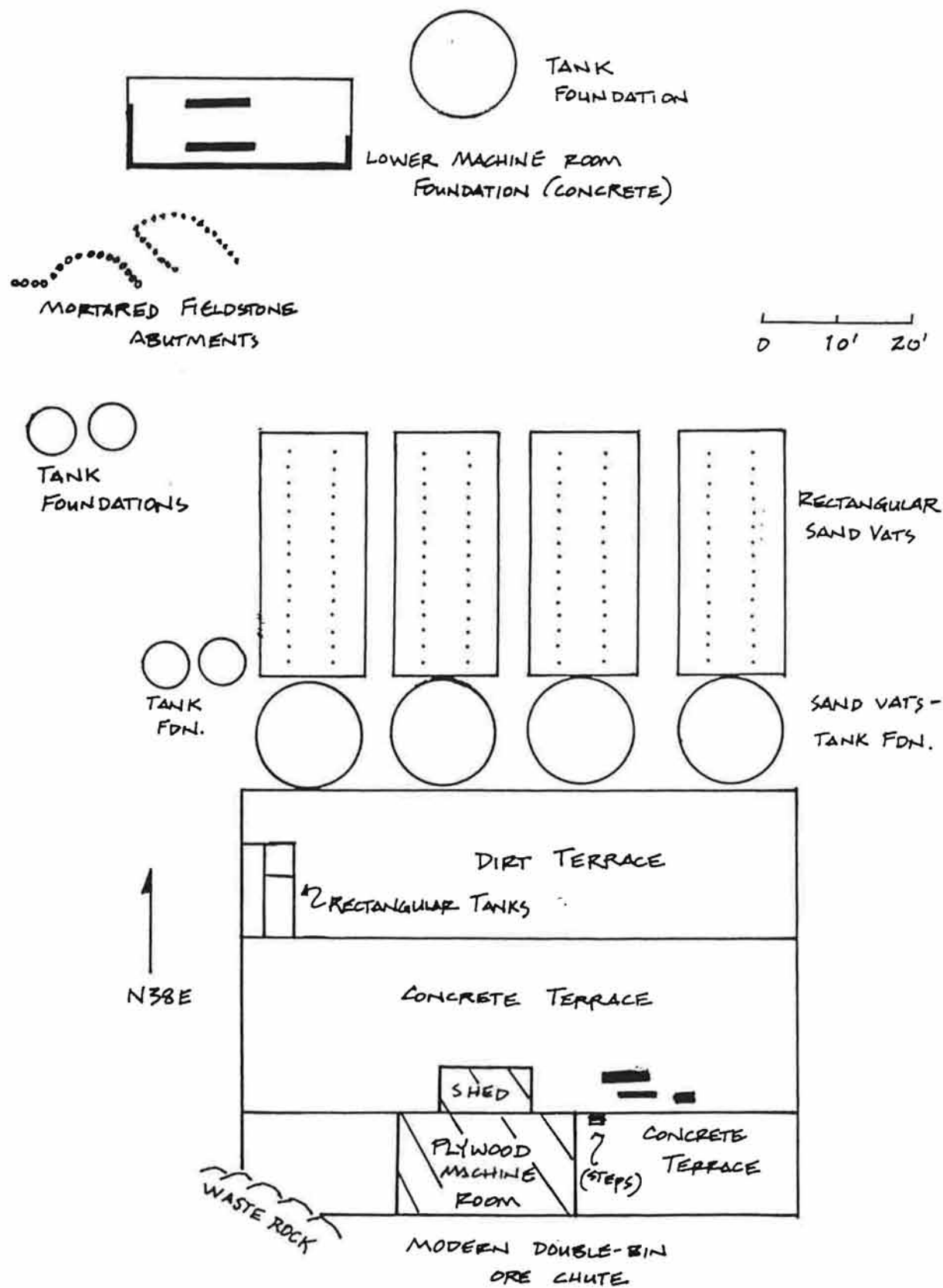


FIGURE 6: Depression era mill foundation remains, Elephant-Eagle site.

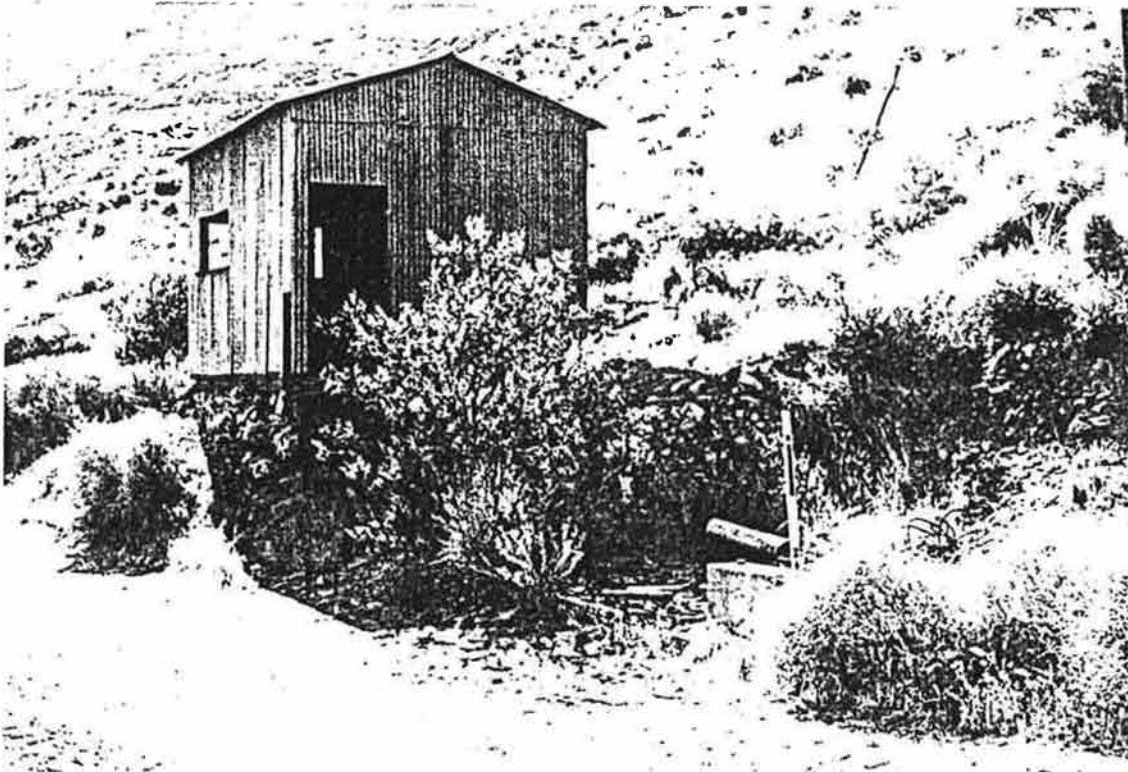


FIGURE 7 - Elephant - Eagle Mill (CA-KER-4455H) area. Modern metal shack on unmortared cobble foundation (left); and concrete pad/foundation on right, indicated by ranging pole. Scale of ranging pole: 1 yard

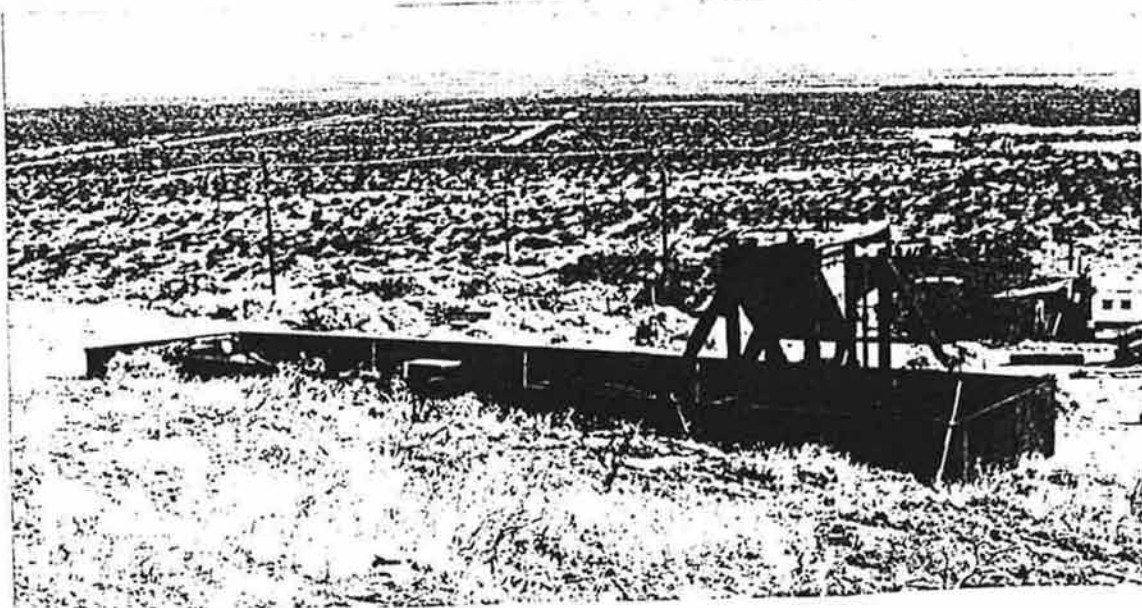
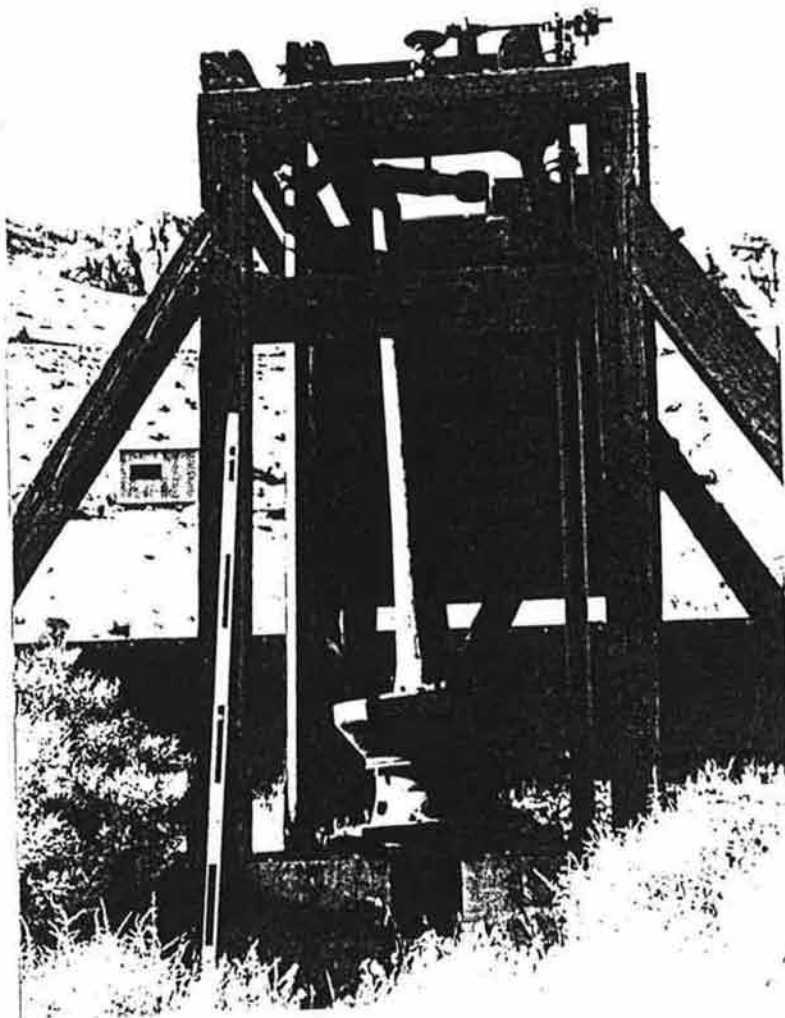


FIGURE 8 - (a) - Upper - Gibson gyratory crusher at the Elephant - Eagle Mill, from the front (output direction); scale of ranging pole - 1 yard; **(b)** - Lower - Gyratory crusher from rear, showing attached ore bin/feeder.

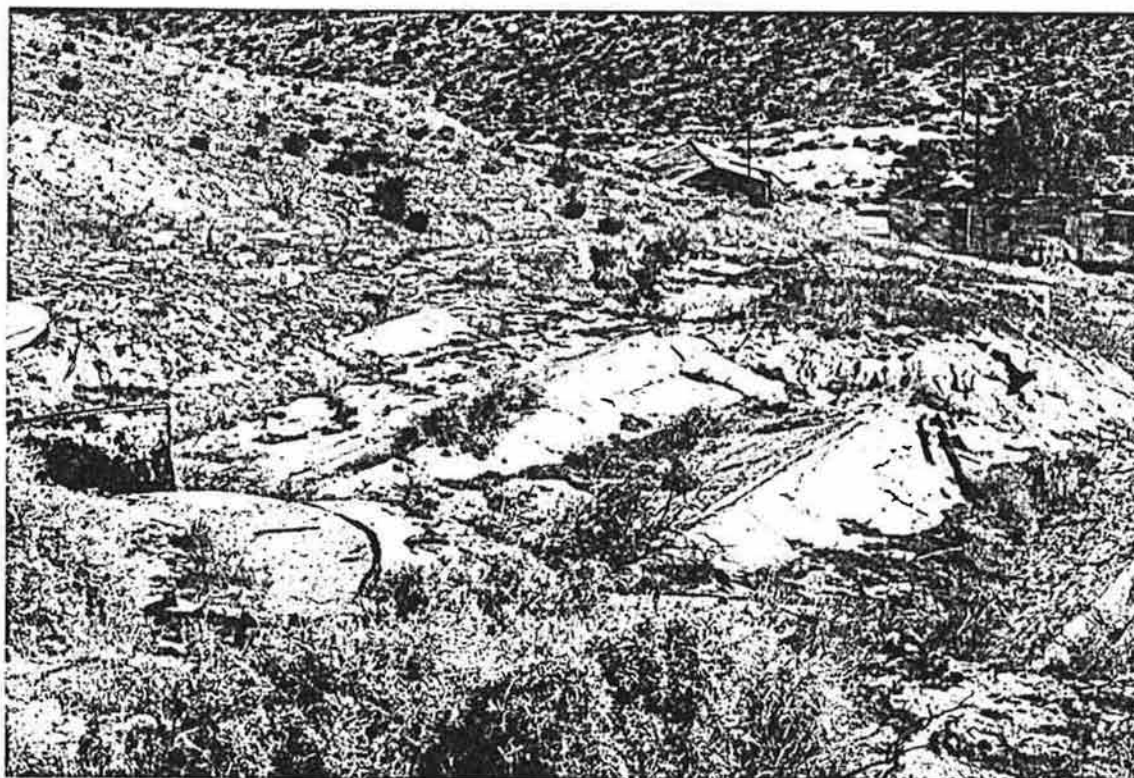
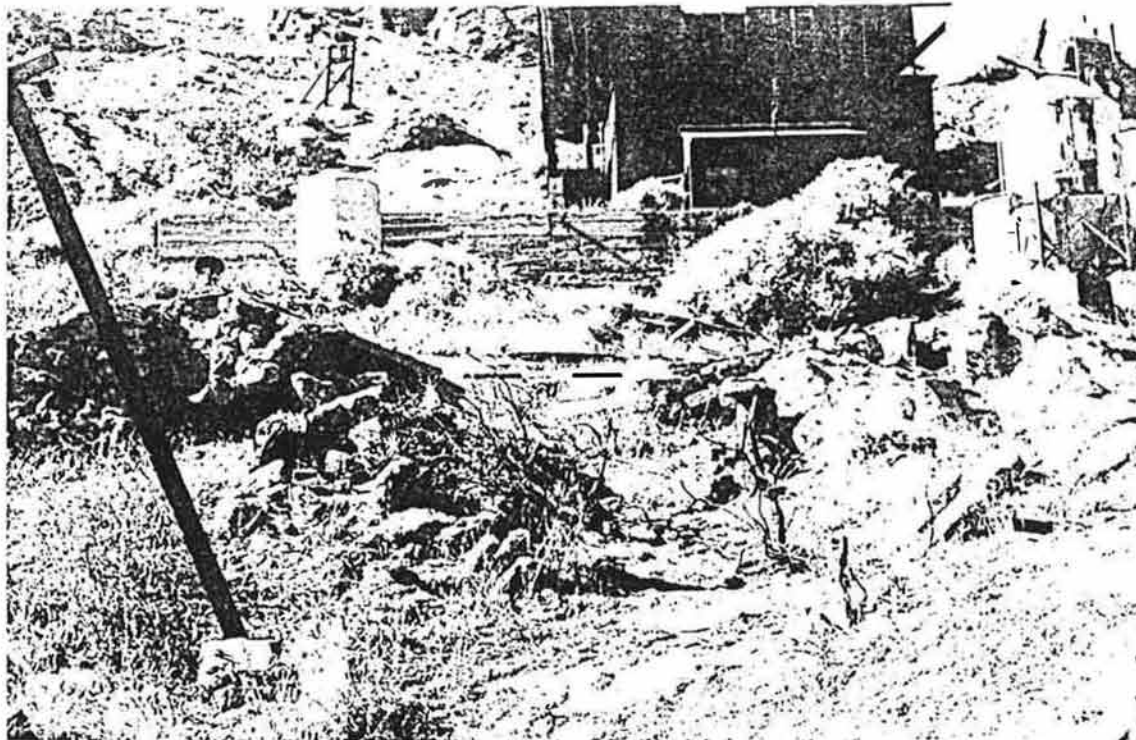


FIGURE 9 - (a) - Upper - Elephant - Eagle Mill seen from east (downslope) Visible is large scavenged wood double-bin ore chute (top center); smaller plywood sided structure over upper foundation of mill; concrete retaining wall between 2nd and 3rd levels of terracing; modern tanks; and, in foreground, V-bottomed sand vats. Scale of ranging pole - 1 yard. **(b)** - Lower - View from southwest of sand vats, included circular vats (bottom left) and V-bottomed concrete tanks. Modern structures in rear.

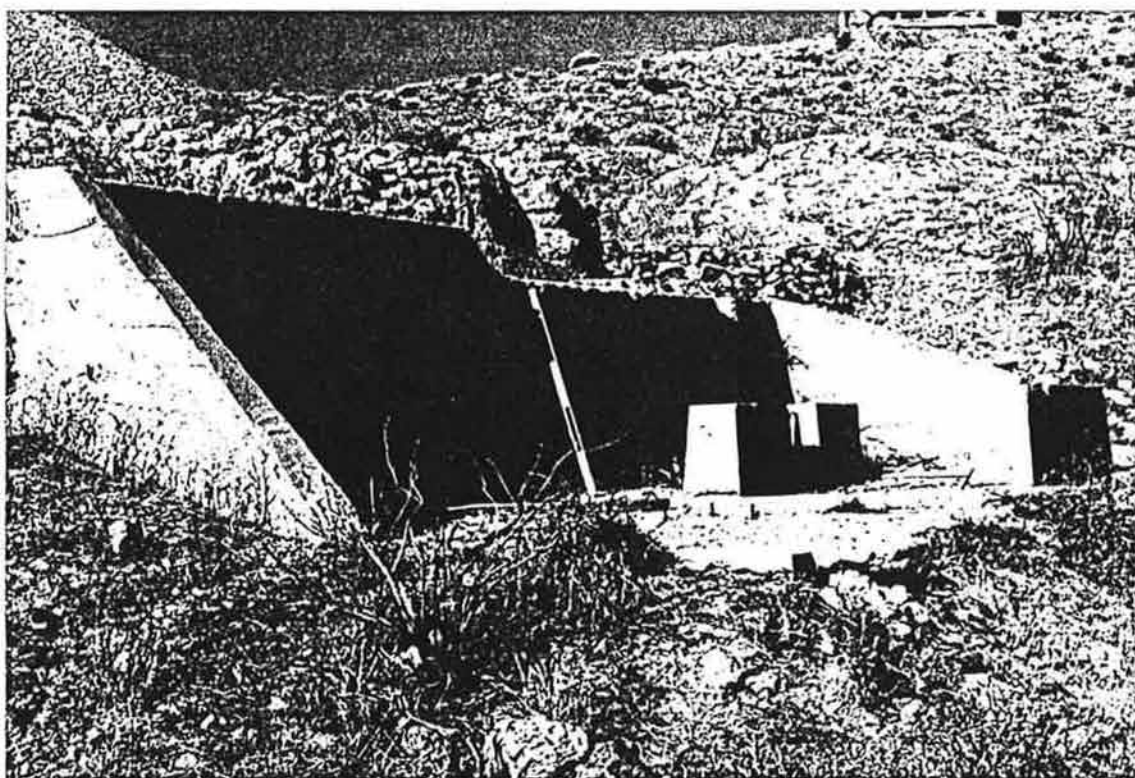
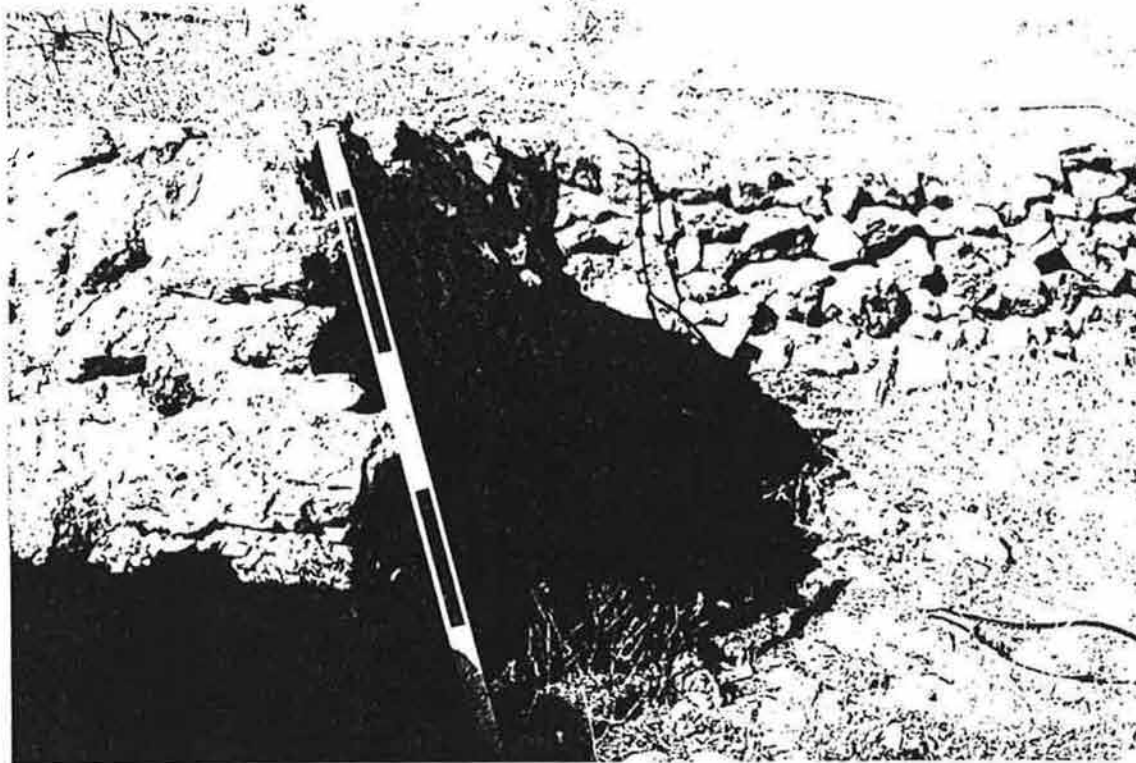


FIGURE 10 - (a) - Upper - Mortared fieldstone abutments, Elephant - Eagle Mill, lower foundations area. Scale of ranging pole - 1 yard. (b) - Lower - Lower machine room foundations, with abutments above. Scale of ranging pole - 1 yard.

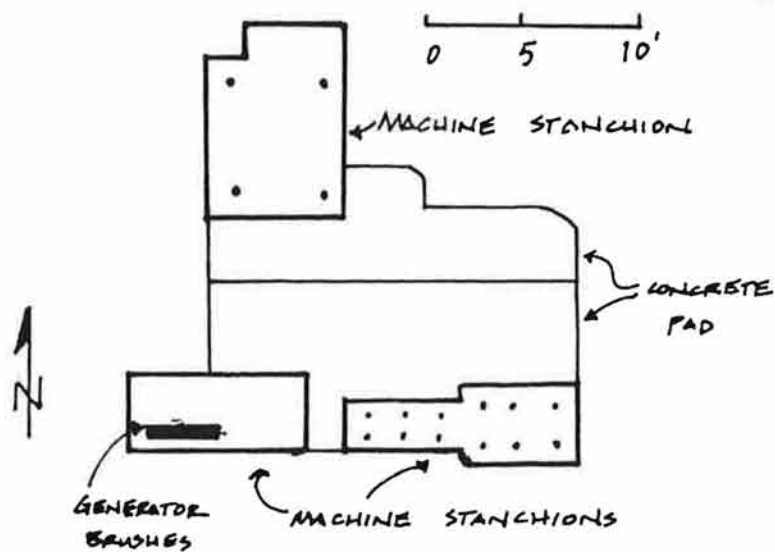


FIGURE 11: Concrete pad and machine foundations, Feature 7 at the Elephant-Eagle site (CA-KER-4455H).

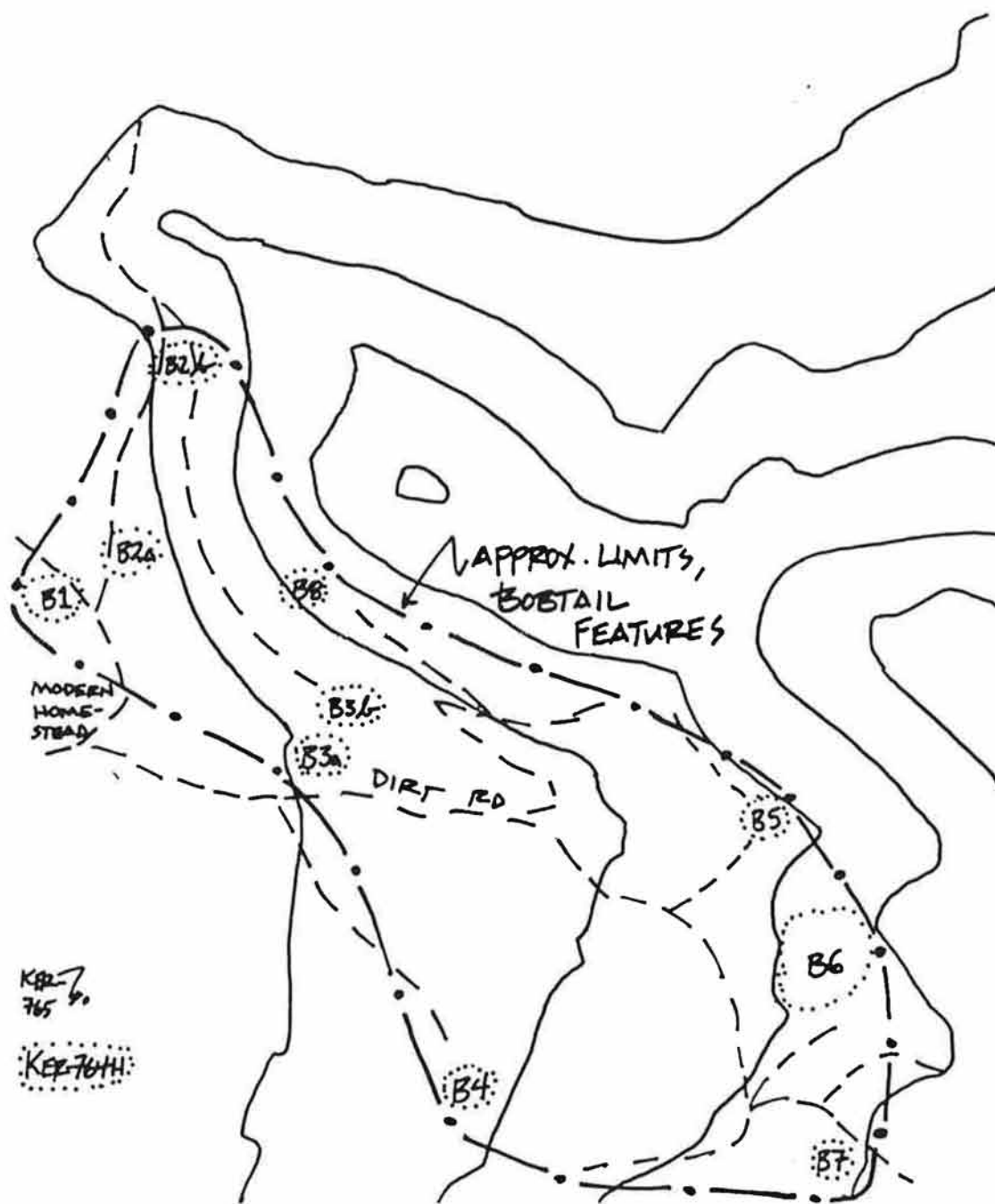


FIGURE 12: Features constituting the Bobtail Area site (CA-KER-4454H). Scale - 1 : 400. B5, B6 and B7 fall outside the study area.

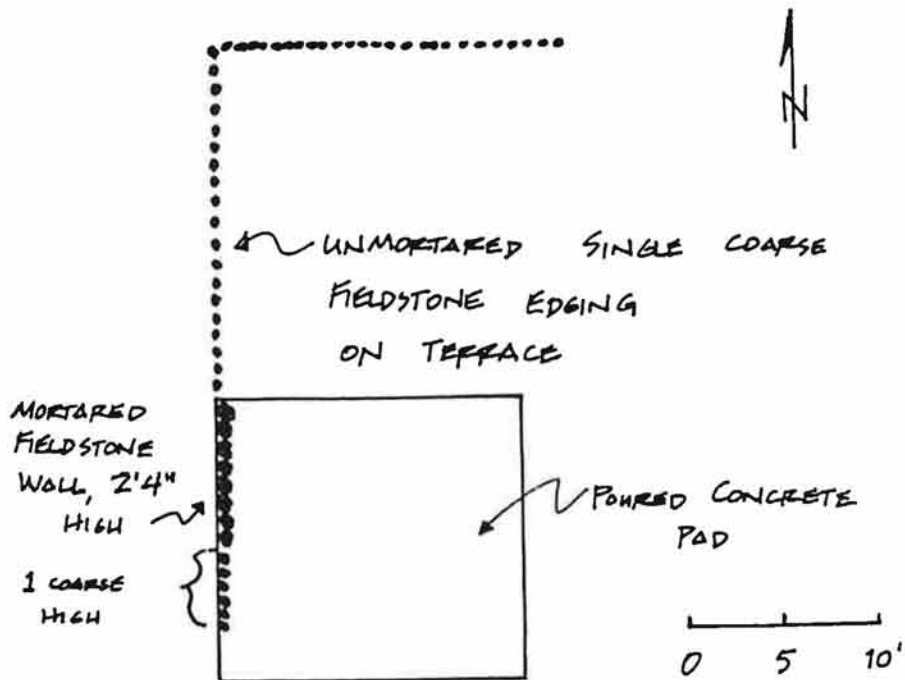


FIGURE 13: Feature B1 at the Bobtail Area site (CA-KER-4454H), consisting of a concrete pad, uncompleted fieldstone wall on west side, and cobble edged terrace.

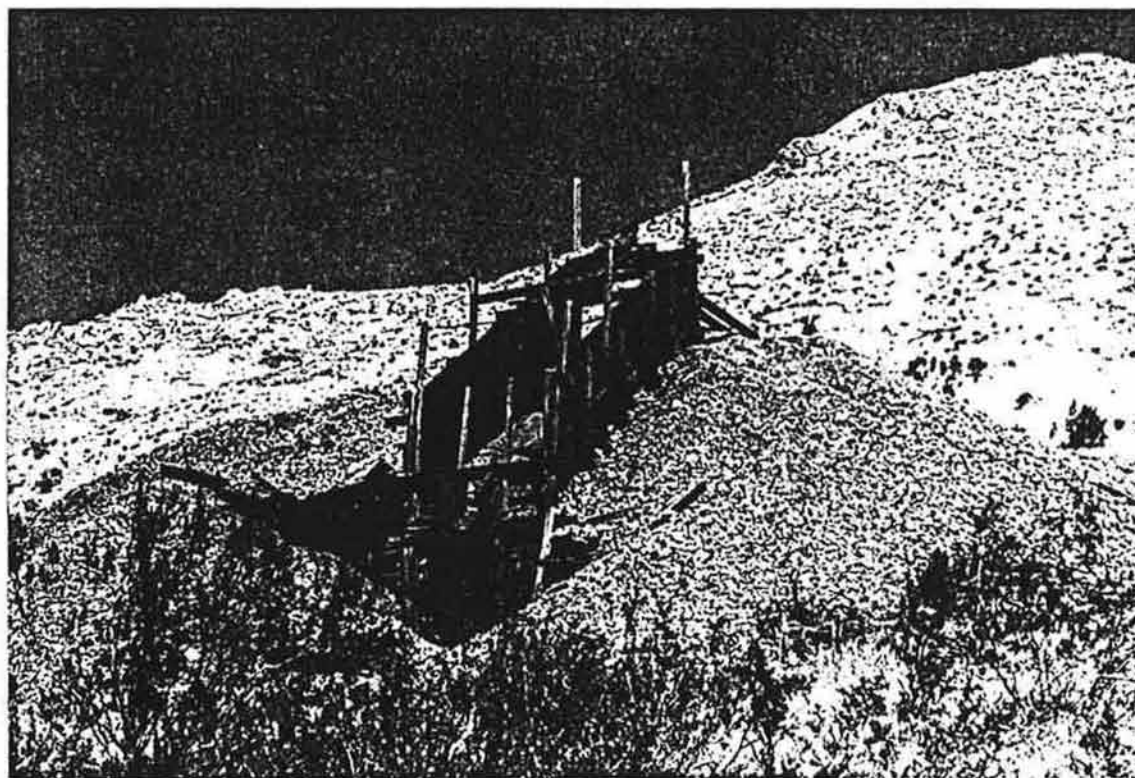
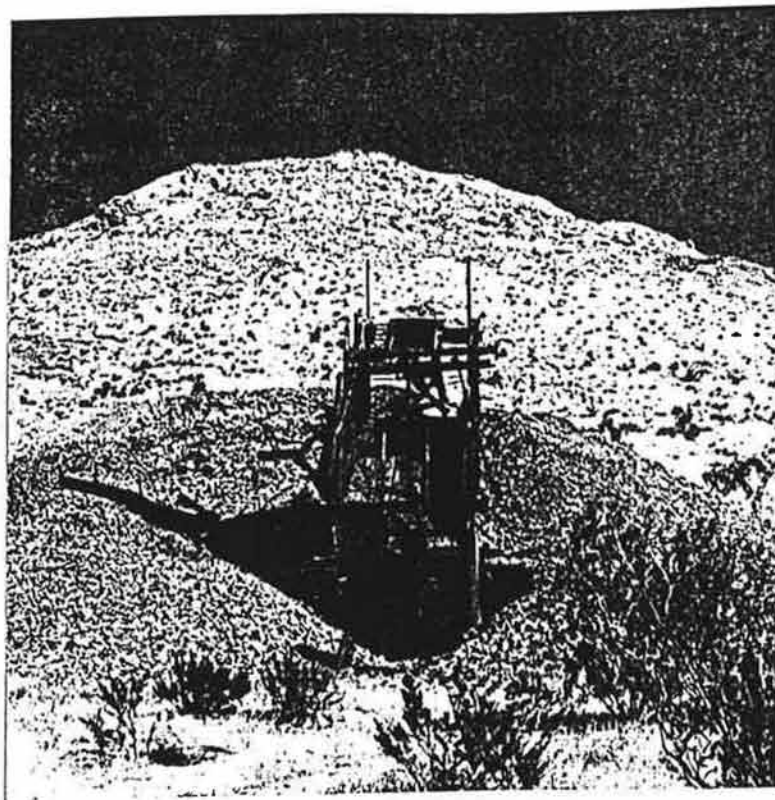


FIGURE 14 - Feature B2a in the Bobtail Area (CA-KER-4454H), a modern (post-Depression) single-bin truck ore chute, showing the general nature and condition of such features. (a) - Upper - viewed from the west; (b) - Lower - from the southwest.

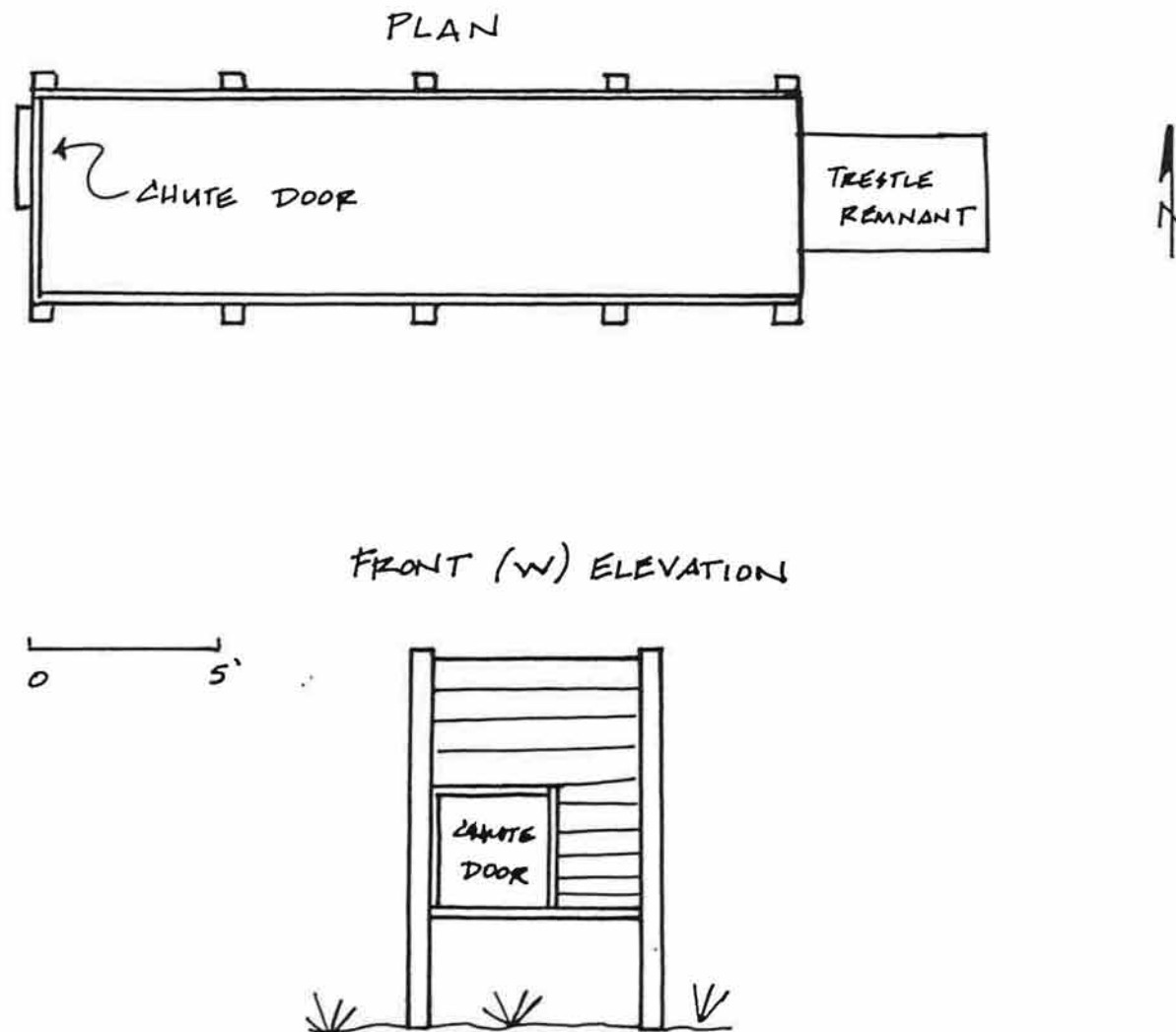


FIGURE 15: Feature B2b, Bobtail area site (CA-KER-4455H), showing the plan and profile of a Depression era single-bin truck ore chute.

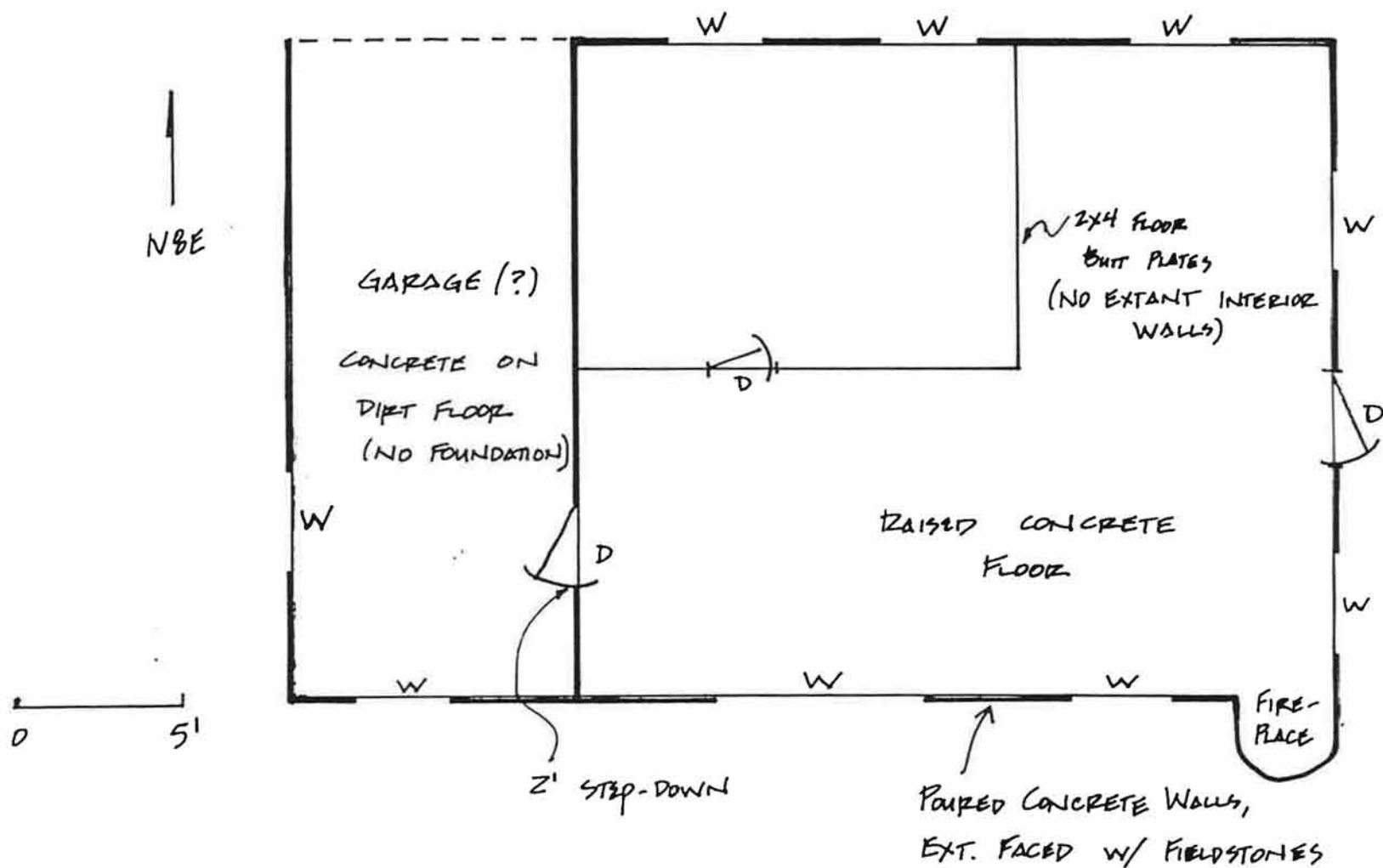
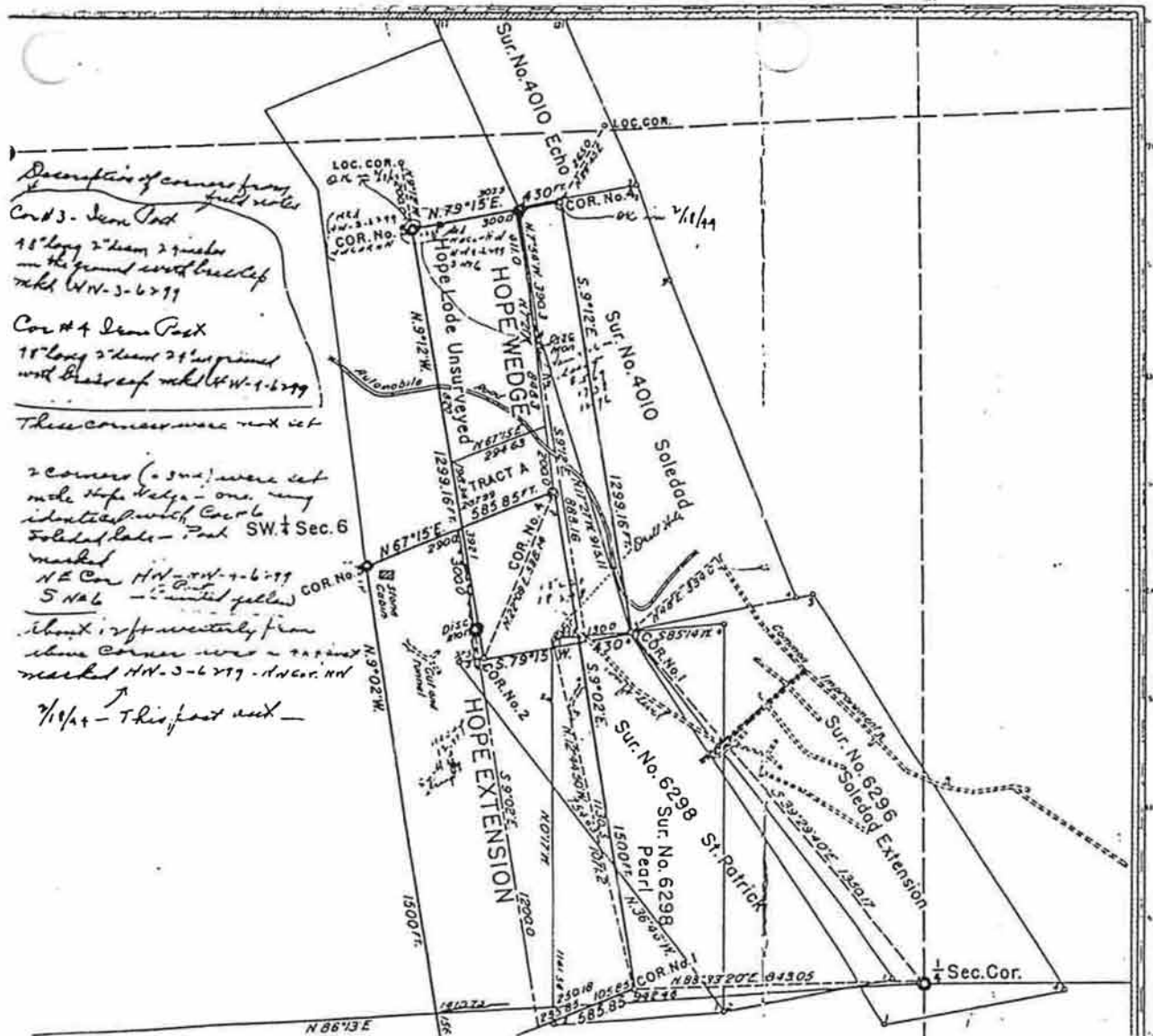


FIGURE 16: Plan of Feature B4, Bobtail Area site (CA-KER-4455H), a Depression era concrete structure, currently missing roof.



MINERAL SURVEY
 No. 6299

CLAIM OF
 GOLDEN QUEEN MINING COMPANY
 AND SOLEDAD MOJAVE MINING
 SYNDICATE

KNOWN AS THE
 HOPE EXTENSION AND
 HOPE WEDGE LODES

SITUATE IN
 Secs. 6 & 7, T. 10 N., R. 12 W., S. B. M.
 KERN COUNTY, CALIFORNIA
 MOJAVE MINING DISTRICT
 Los Angeles Land District

0 50 100 200 300 400 500 600 700 800 900 1000

Scale: 1 inch = 300 feet

Magnetic Declination 16° 20' East

Surveyed October 21 to December 16, 1942
 by Edward L. Haff, Mineral Surveyor

UNITED STATES DEPARTMENT OF THE INTERIOR
 GENERAL LAND OFFICE

Public Survey Office
 Glendale, California, April 10, 1943

I hereby certify that this plat of Mineral Survey
 No. 6299, California, is strictly conformable to the

FIGURE 17: 1942 Mineral Survey of claims on the eastern side of the Bobtail Area site (CA-KER-4455H). "Stone cabin" shown in NW corner of Hope Extension is Feature B4 (Figure 16). None of the remaining Bobtail Area features are shown on this plat, suggesting that they all may post-date 1942.

APPENDIX A: ARCHIVAL RECORD SEARCH



FRESNO
KERN
KINGS
MADERA
TULARE

Southern San Joaquin Valley
Information Center
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, California 93311-1099
805/664-2289 FAX 805/664-2415

To: Robert R. Schiffman

(RS# 303)

RE: Golden Queen Mining Co. Project

County: Kern

Map(s): Soledad Mountain 7.5'

The Information Center is under contract to the State Office of Historic Preservation and is responsible for the local management of the California Historical Resources Inventories. The Center is funded solely by research fees, and a grant from the State Office of Historic Preservation. The Information Center does not conduct fieldwork and is not affiliated with any archaeological consultants who conduct fieldwork.

CULTURAL RESOURCES RECORDS SEARCH

The following are the results of a search of the cultural resources site record files at the Southern San Joaquin Valley Information Center. These files include known and recorded archaeological and historic sites, inventory and excavation reports filed with this office, and properties listed on the National Register of Historic Places, the California Historical Landmarks, The California Inventory of Historic Resources, The California Points of Historical Interest and The California Historic Resources Inventory.

The following summarizes the current information available on the subject property based on the records outlined above.

PRIOR CULTURAL RESOURCE INVENTORIES OF THE SUBJECT PROPERTY AND SURROUNDING AREAS

There have been no previous archaeological inventories on the subject property or on the immediately adjacent property. There have been two surveys conducted within one-mile radius of the subject property. Your survey for the Shell Mining Project and a survey done in 1994 by Dorothy Fleagle for Alex Sokolow. According to your map, submitted with your records search request, there was a survey conducted by you in 1988 for Parcel Map # 8686, just southeast of the project area. The report for that survey is not in our files. Please send us a copy of that report so we may incorporate it into our system.

KNOWN CULTURAL RESOURCES ON THE SUBJECT PROPERTY

There are two recorded archaeological sites on the subject property. CA-KER-764H & CA-KER-765. The historic site is a mine related site from the early 1900's. The prehistoric site consists of bedrock milling features. Both were recorded in 1977 by Montizambert & Portillo. It would be advisable to relocate these sites and update the records accordingly.

KNOWN CULTURAL RESOURCES IN THE VICINITY OF THE PROJECT PROPERTY

There are no recorded archaeological sites on the immediately adjacent property. However, there are three recorded sites within a one-mile radius of the project area, (copies of site records are included).

There are no listed properties on the National Register of Historic Places, The California Historical Landmarks, The California Inventory of Historic Resources, California Points of Historical Interest or on the Historical Resources Inventory.

CULTURAL RESOURCE SENSITIVITY OF THE PROJECT PROPERTY

The Soledad Mountain area of Kern County has long been considered to be sensitive for cultural remains, both historic and prehistoric. Mining operations have been ongoing since before the turn of the century.

RECOMMENDATIONS

A field survey should be conducted by qualified archaeologist of the entire project area. An historian that meets Secretary of Interior standards, with experience in evaluating mining-related resources, should be consulted for recommendations and appropriate mitigation measures during the course of the survey.

As mentioned above, CA-KER-764H and CA-KER-765 should be field checked and the records updated to reflect any changes since they were recorded in 1977.

According to William Seidel, archaeologist for the State Office of Historic Preservation, research of written histories and documents relating to this area should be undertaken, and all major features, such as homesteads, mine entrances, shafts, and foundations, etc., should be recorded and assessed for historical and/or archaeological significance. Features of minor value, such as tailings, cairns, glory holes, and minor ditches should be noted on the 523 Primary Record test form. I have enclosed a copy of the form for your convenience.

(RS# 303)

As you are know, any resources 50 years or older should be recorded on the appropriate forms and assessed for historical significance, as mentioned above.

A technical report should be submitted to our office within 30 days of completion of the field survey.

You stated in our phone conversation today, that you had a "very in depth" conversation with William Seidel at The Office of Historic Preservation regarding this project. Any additional recommendations made by Mr. Seidel, if not outlined above, should be implemented.

If you have any questions or comments, please contact me.

By:



Adele Baldwin
Assistant Coordinator

Date: January, 5, 1995

Fee: \$90.00/hr. fee

Invoice #: 5796

10.0

SITE RECORD FORMS AND UPDATES

BLM CALIFORNIA DESERT PROJECT
HISTORIC SITE SURVEY FORM

County	Kern
District	010
Planning Unit	Antelope Valley
Sample Unit	-----
Photos	none
Date	5/19/77
Recorder	Montizambert/Portillo

Site Number Ker 000764 2. Site Name _____

Other (numbers/names) _____ AV-3

4. Location: Twn 10N, Rng 12W, SW $\frac{1}{4}$ of
SW $\frac{1}{4}$, of Sec 6, Quad Soledad Mtn. 7.54 Elev 2950

Reference Points: 1800 feet East of Silver Queen Road, near base of Soledad Mountain, 900 feet South of road leading to Bobtail Mines, approx. 300 feet East of Section line, in a small draw.

UTM Grid Loc: Zone ----- North ----- East -----

5. Ownership: BLM X, Other Federal __, State __, Private __, Unk __,

6. National Register Status: Candidate __, Potential X, Determined
not Eligible __, No Determination __,

7. Disturbance: Animal __, Burning __, Vandalism __, ORV __,
Other X, Explain Erosion from wash

8. Present Condition: Good __, Fair X, Poor __, Explain _____

9. Activity: Mining X, Railroad __, Military __, Homesteading __,
Exploration/Traveling __, Settlement __, Ranching __,
Other __, Explain _____

10. Site Type: Town __, Camp __, Homestead __, Road __, Trail __,
Mine X, Railroad __, Graveyard __, Trashdump __,
Military __, Other _____

11. Features: Structure X, Dugout __, Fire Hearth __, Cairn X,
Rock Alignment __, Trashdump __, Irrigation __,
Trail __, Road X, Corral __, Burial __, Well __,
Spring __, R&R Grade (berm) __, Tram (road/way) __,
Tailings X, Other __, Explain _____

see page 2

12. Artifacts: Wood (size,type) __, Glass (color) __, Metal (type) X,
Bone (species) __, Ceramic (color) __, Adobe (con-
dition) __, Nails (size,type) __, Cans (size,type) __,
Ordinance __, Other __, Explain _____

13. Temporal Period: Circa early 1900's, Era _____

(continue on reverse side,
refer by number)

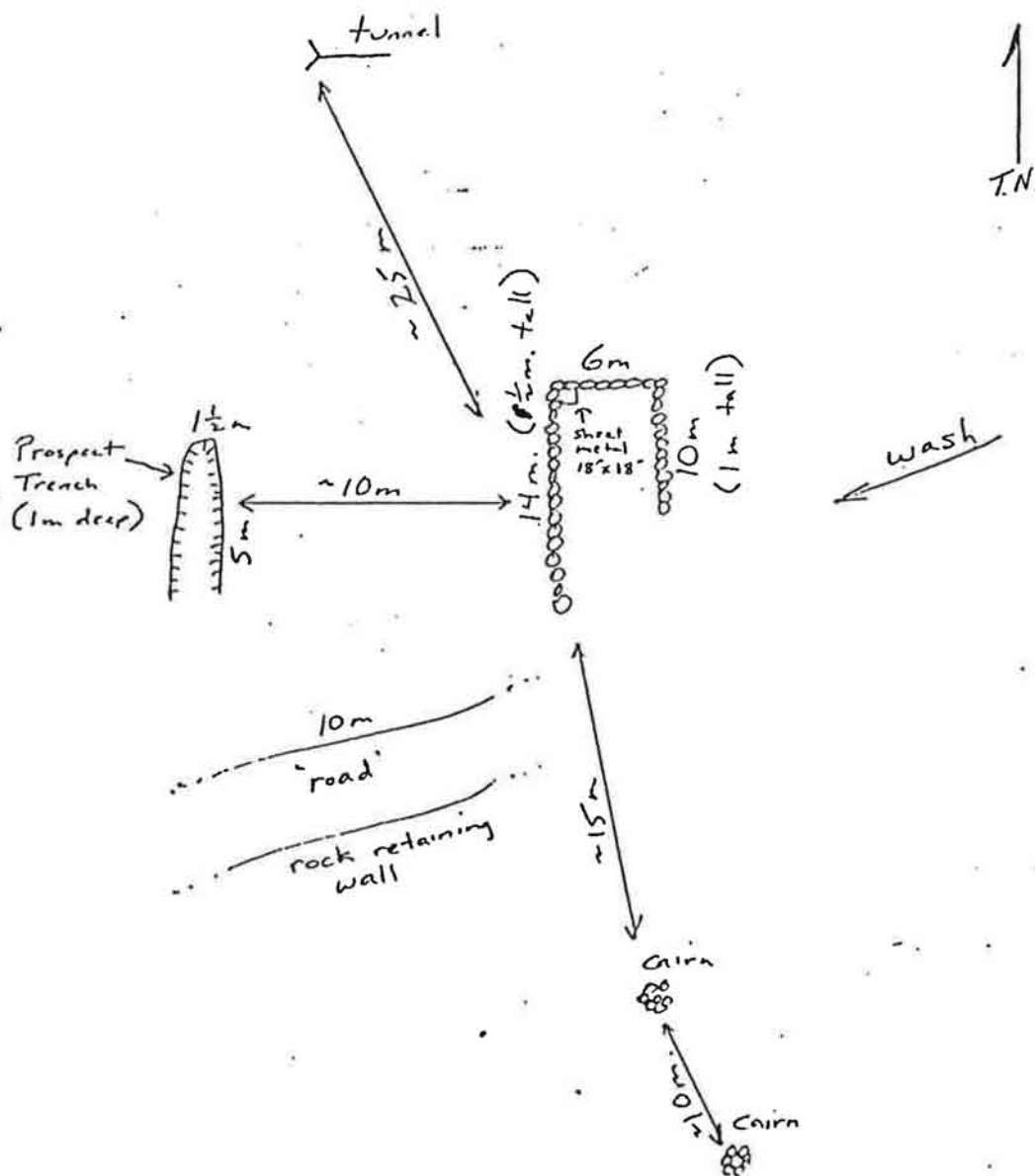
HLM BAKERSFIELD DISTRICT ARCHAEOLOGICAL
SITE SURVEY FORM (continuation sheet)

Site Number: Ker000764 Site Name: AV-3 County: Kern

Recorder: Montizambert/Portillo Date: 5/19/77

The site is situated in a small draw and consists of a dry-laid stone foundation spanning the wash, two rock cairns, a short road leading to the site, a trench downslope across the wash, and a horizontal mine shaft. Vegetation consists of creosote, grasses, foxtail, and filaree.

Although the site would not be eligible for nomination to the National Register of Historic Places as a single entity, nearly all of Section 6 may be eligible as a Historic District. Some research into the history of the nearby Golden Queen Mine and Bobtail Mines is recommended for National Register consideration.



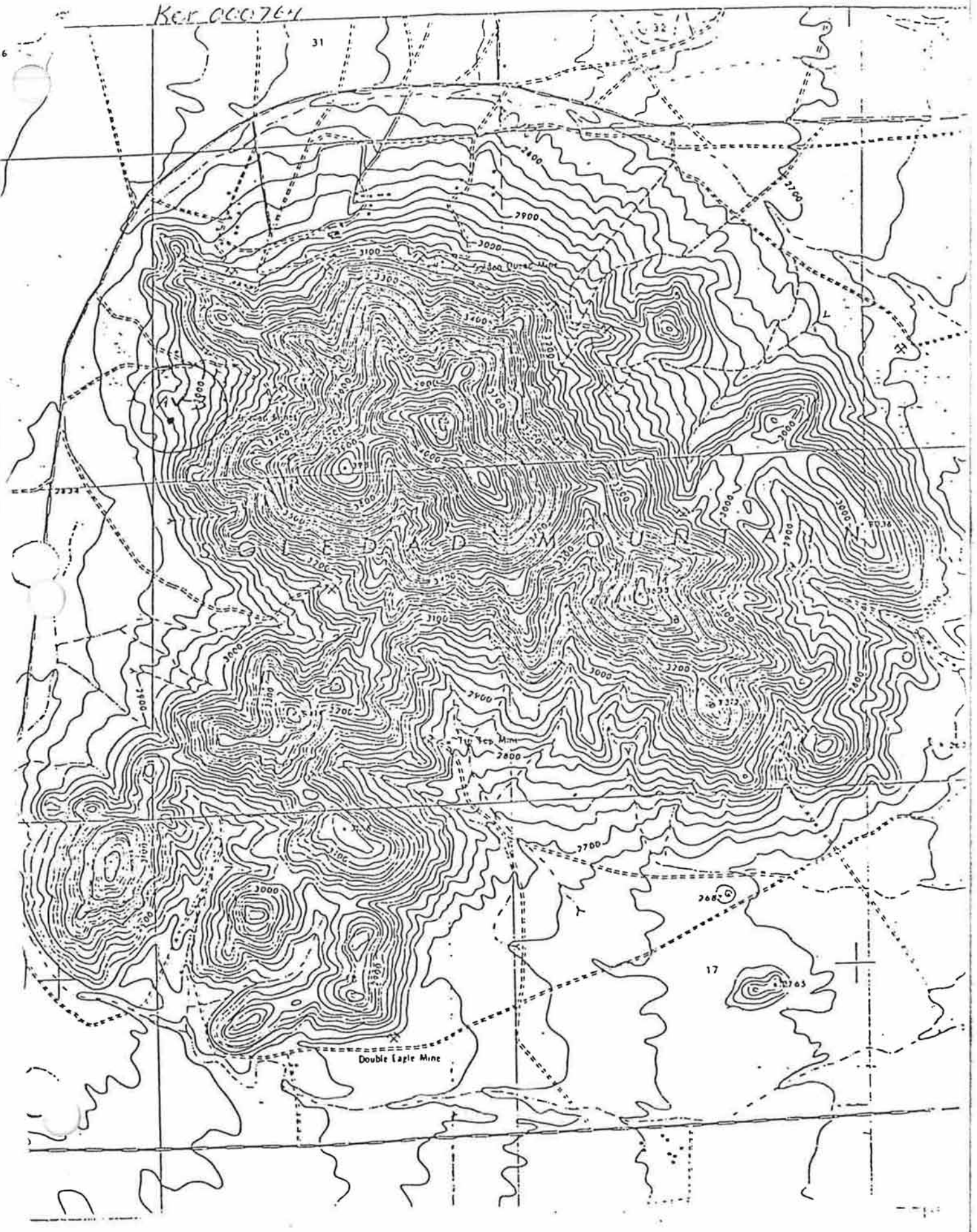
SOLEDAD MOUNTAIN

10 05'

Ker 000764

31

32



ARCHAEOLOGICAL SITE SURVEY RECORD

[8] Site # Ker 000765 [9] Other # AV-4

[10] Site Name _____

[11] Cadastral Location: Twn 10N Rng 12W NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Sec 6

[12] Quadrangle Soledad Mtn. 7.5' [13] Elevation 2925'

[14] UTM Grid Loc. Zone ----- Northing ----- Easting -----

[15] Reference Points: 1500 feet East of Silver Queen Road, near base of Soledad Mtn., approx. 300 feet South of South fork of road leading to Bobtail Mines, approx. 100 feet East of Section line, in a shallow wash.

[2] District 010
[3] Planning Unit AV
[4] Sample Unit -----
[5] Photos 1 color print
[6] Date 5/19/77
[7] Recorder Montizambert/Portillo

[16] OWNER					[17] NAT'L REGISTER					[18] DISTURB					[19] CNDT			[20] COMMENTS
BLM.	OTHER FED.	STATE	PRIVATE	UNKNOWN	(A) STATUS			(B) TYPE		DEVELOPMENT	ANIMAL	VANDALISM	ORV	OTHER	GOOD	FAIR	POOR	
X					LISTED	CANDIDATE	POTENTIAL	NOT ELG.	NO DET.	DISTRICT	SITE	OTHER						

[21] SITE TYPES												[22] AREA				[23] DEPTH													
VILLAGE	TEMPORARY CAMP	SHELTER/CAVE	MILLING STA.	LITHIC SCATTER	QUARRY SITE	POTTERY LOCUS	CENETERY	CREMATION LOCUS	INTAGLIO	ROCK ALIGNMENT	PETROGLYPH	PICTOGRAPH	TRAIL	ROASTING PIT	ISOLATED FIND	CAIRN	HISTORIC	OTHER	0-10 Sq. M.	11-50	51-250	251-1000	1001-5000	over 5000	SURFACE	1-20 Cm.	21-100	over 100	UNKNOWN
			X																X						X				

[24] General Site Description: The site consists of one shallow bedrock mortar, on the North bank of a small wash. The terrain is very rocky, from an alluvial deposit. It is possible that a small granary exists approx. 30 feet North, although the amount of alluvium effectively disguises features.

[25] FEATURES								[26] ARTIFACTS								[27] ECO.				[28] MAT.										
STRUCTURAL DEP.	ROCK RING	ROCK STRUCTURE	CAIRN / SHRINE	ROASTING PIT/FAR	HEARTH	PETROGLYPHS	PICTOGRAPHS	BEDROCK MORTAR	GRINDING SLICK	OTHER	PROJECTILE POINT	FLAKED STONE TOOL	CORE-DETRITUS	MILLING TOOL	OTHER GROUND STONE	CERAMIC	BONE	PERISHABLE	ORNAMENT	HISTORIC	OTHER	FIRE AFFECTED ROCK	FAUNA	FLORA	OTHER	CRYPTOCRYSTALLINE	OBSIDIAN	FELSITE	OTHER	
	?							X																						

[29] Describe: The bedrock mortar is approx. 8 cm. in diameter and 1 cm. deep. It is situated on a piece of bedrock approx. 2 feet by 3 feet in size.

BLM BAKERSFIELD DISTRICT ARCHAEOLOGICAL
SITE SURVEY FORM (continuation sheet)

Site Number: Ker 000765 Site Name: AV-4 County: Kern

Recorder: Montizambert/Portillo Date: 5/19/77

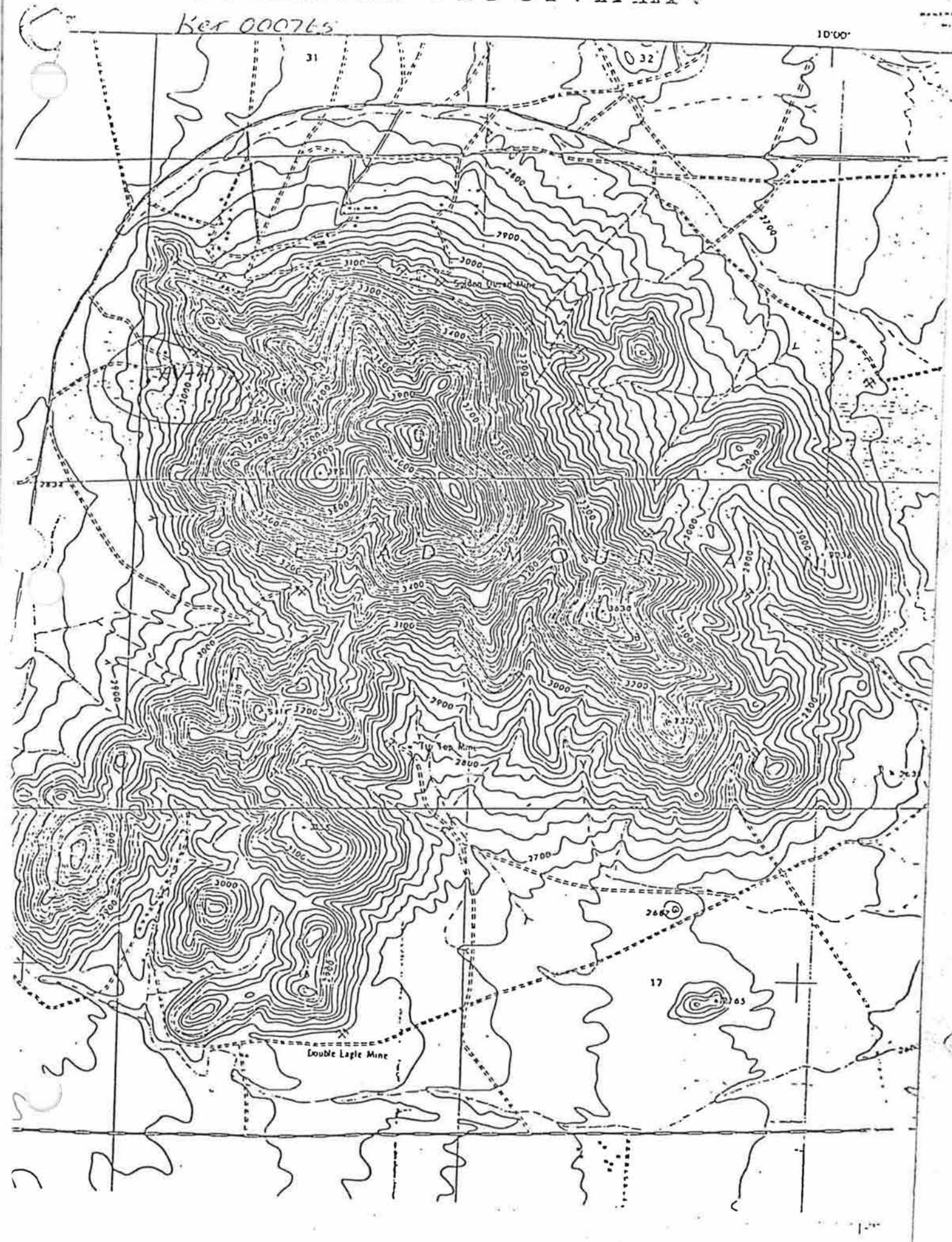


Single Bedrock Mortar
AV-4

SOLEDAD MOUNTAIN

Ker 000765

10'00"



[30] VEGETATION	
	BARREN
X	SALTBUSH
X	CREOSOTE
	JOSHUA/CREOSOTE
	JOSHUA/YUCCA
	YUCCA/CACTUS
	BLACKBRUSH
	SAGEBRUSH
	PINYON/JUNIPER
	CONIFER
	SHADSCALE
	CHAPARRAL
	OAK WOODLAND
	MESQUITE
	RIPARIAN
	WASH
	GRASSLAND
	OTHER
[31] COVERAGE	
X	CONTINUOUS (over 75%)
	INTERRUPTED (50-75%)
	PARK-LIKE (25-50%)
	RARE (6-25%)
	SCALEDY PRESENT (1-5%)
	ABSENT (0-1%)
[32] WATER	
X	INTERMITTENT STREAM
	PERMANENT STREAM
	SPRING
	PLAYA
	OTHER

[33] Describe Vegetation consisted of creosote, saltbush, grasses, filaree, and foxtail

[34] LANDFORM	
	MOUNTAIN
	HILL
	TERRACE
	RIDGE
X	ALLUVIAL FAN
	CANYON
	ARROYO
	SAND DUNE
	DESERT PAVEMENT
	BADLANDS
	PLAYA
	OTHER
[35] BEDROCK	
	EXTRUSIVE IG.
	INTRUSIVE IG.
	METAMORPHIC
	SEDIMENTARY
X	QUATERNARY ALLUV.
	OTHER
[36] TEXTURE	
X	SAND
	LOAM
	SILT
	CLAY
	OTHER
[37] SOILS	
	MIDDEN
X	ALLUVIAL
	COLLUVIAL
	EOLIAN
	BEDROCK
	OTHER

[38] Describe

[39] SLOPE	
	POINT OF INFLEX
	LOWER 1/3
X	MID 1/3
	UPPER 1/3
X	0-5°
	6-15°
	16-30°
	31-60°
	over 60°
[40] ASPECT	
	NORTH
	NORTH/EAST
	EAST
	SOUTH/EAST
	SOUTH
	SOUTH/WEST
X	WEST
	NORTH/WEST
[41] EROSION	
	DEFLATION
	RILLING
	GULLYING
	SHEET/WASH
X	ROCK/DEBRIS
	SLUMPING
	OTHER
[42] DRAIN.	
X	CONVERGING
	DIVERGING
	BRAIDED
	OTHER

[43] Remarks

ARCHAEOLOGICAL SITE RECORD

W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: *Kyr-4454H*
Temp. Design: Bobtail Area

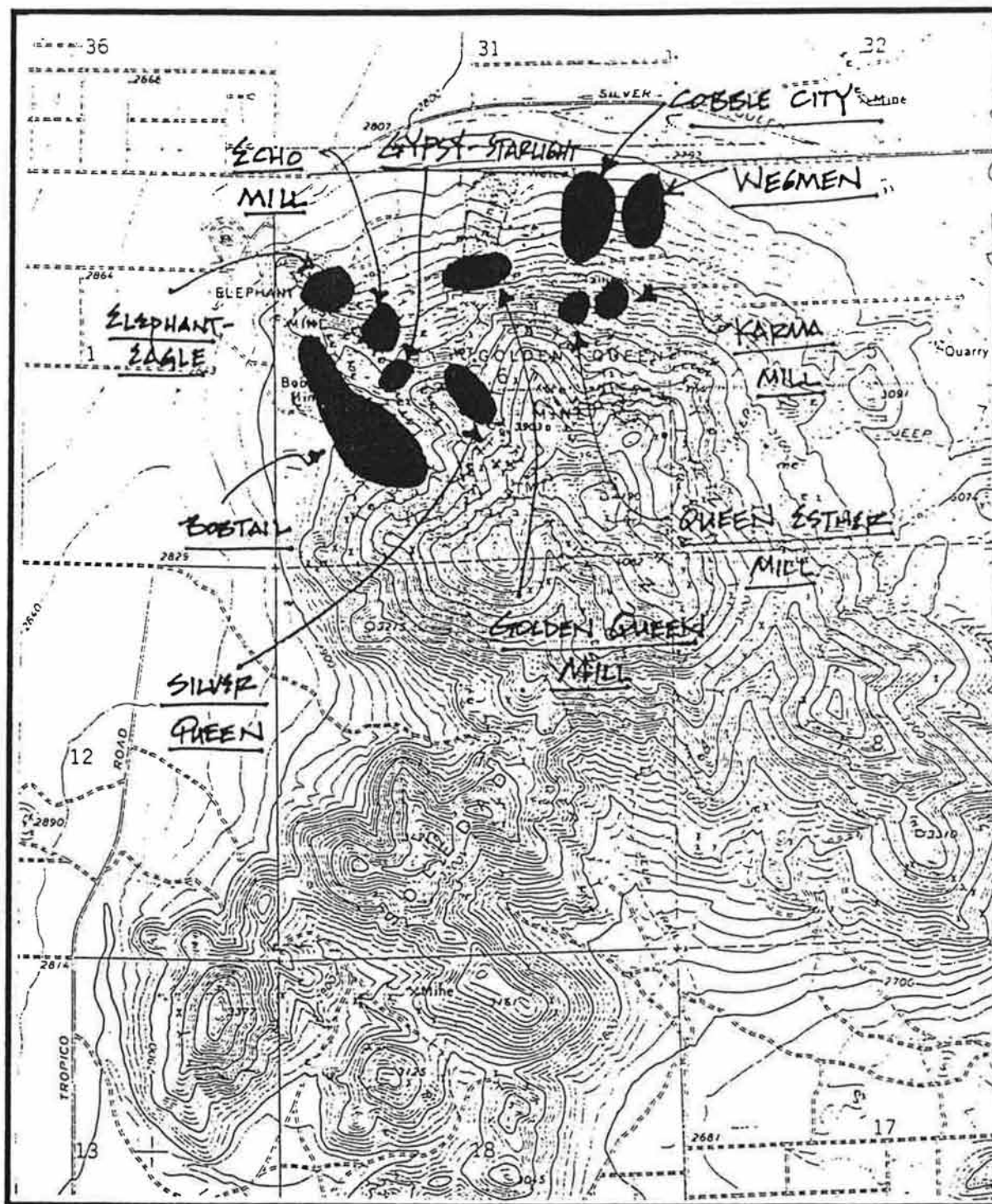
Page 1 of 5 .

1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: 390575 mE 3871850 mN (middle)
N - 390375/3872225; W - 390450/3871850; E - 390800/3871850;
S - 390725/3871650
4. Twp. 10N Rng. 12W; SE 1/4 SE 1/4 SE 1/4 SW 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 68 mmS 192 mmE 6. Elevation: 3080
7. Location: On W/NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: Depression era & later mining features
10. Area: 500 m (N/S) x 500 m (E/W); 250000 m².
Method of determination: Paced
11. Depth: none Method of Determination: Subsurface Probing
12. Features: 3 truck ore chutes (Depression era or modern); Depression era concrete structure; cobble wall structure; machine shop foundations; pad, cobble wall & small can dump (turn-of-century)
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI VALLEY 93065
18. Human remains: NONE
19. Site Integrity: Poor. Evidence of continuous re-use & scavenging of earlier materials, so little integrity except for modern ore chutes. Few assoc'd artifacts. Most features only questionably meet age criteria for archaeological sites (i.e., most appear modern).
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-10% 29. Exposure: W
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Minor/peripheral 20th century mining area w/ no assoc'd mill sites & very little habitation evidence. Remains from Bobtail adits (chutes to n end) & Soledad Ext adit (concrete pad @ S end)

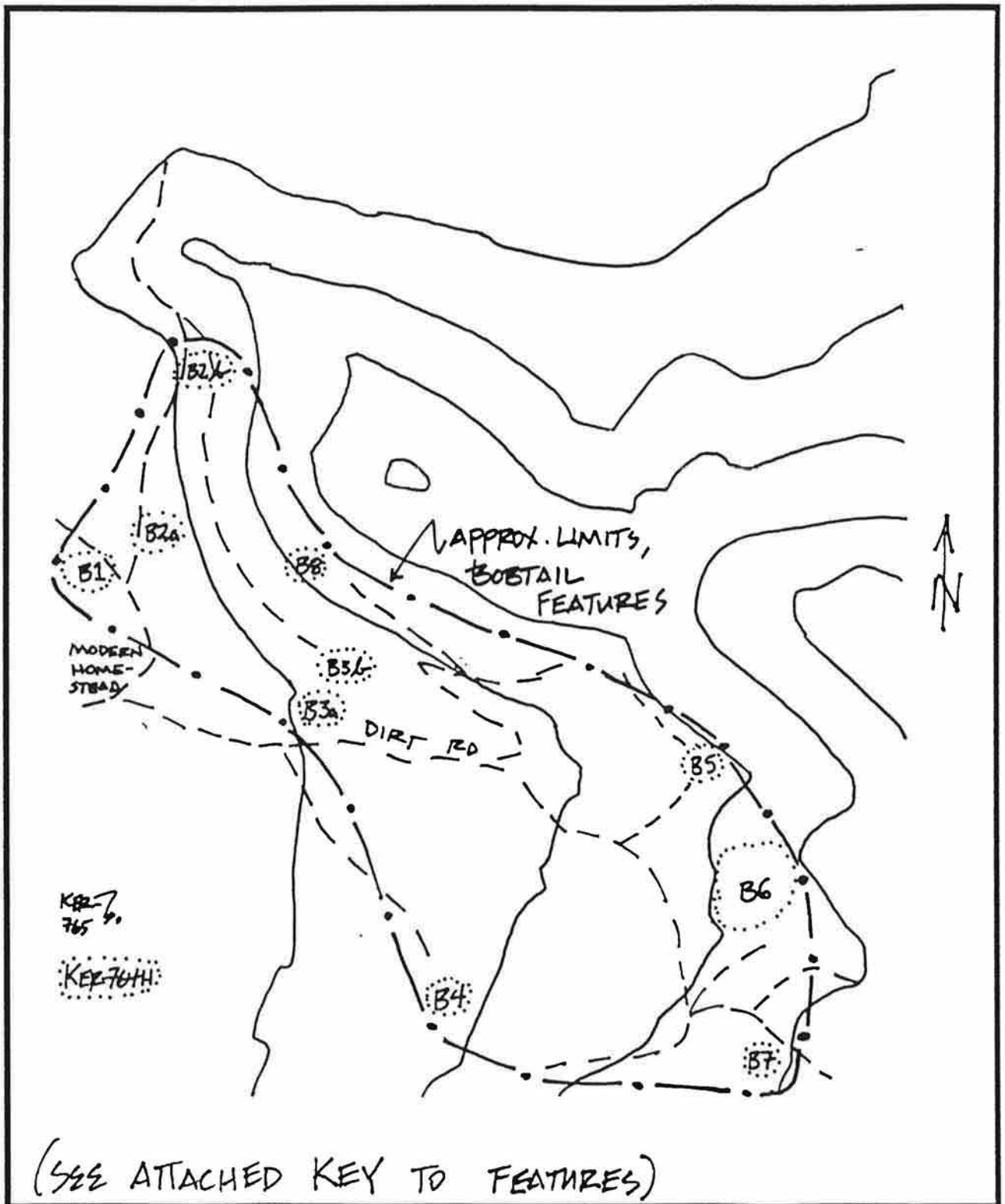
CA-KER- 4454H, CONT'D
BOBTAIL AREA

32. **References:** Class III inventory of Soledad Mtn; see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines Report 31:465-85.
33. **Name of project:** as above
34. **Type of Investigation:** Class III inventory
35. **Site accession no.:** GQ/95- **Curated at:** W&S
36. **Photos:** Yes **Taken by:** Whitley
37. **Photo accession no.:** GQ **On file at:** W&S

USGS TOPO:
 SOLEDAD MOUNTAIN
 7.5; Scale 1 : 2000



BOBTAIL MINES AREA
FEATURES
SKETCH MAP
1"=400'



SITE FEATURES

BOBTAIL MINES AREA
FEATURES.

PAGE 5 OF 5.

FEATURE # DESCRIPTION

COMMENTS

Bobtail Area

B1	Pad, cobble wall & dump	Turn-of-century
B2a	Truck ore chute	Depression era or later
B2b	Truck ore chute	Depression era or later
B3a	Adit and wood trestle	Depression era or later
B3b	Wood landing/ramp	Depression era or later
B4	Concrete structure	2 room, Depression era
B5	Ore chute, ramp and adit	Starlight (?)
B6	Soledad Ext Machine Rm fdn.	Concrete foundations; post-Depression + earlier remains
B7	Cobble structure	2x4 m, no roof, no artifacts
B8	Headframe on open cut	Deadman below using cable & 55 gal drums, modern

(FEATURE LOCATIONS ON SKETCH MAP).

ARCHAEOLOGICAL SITE RECORD

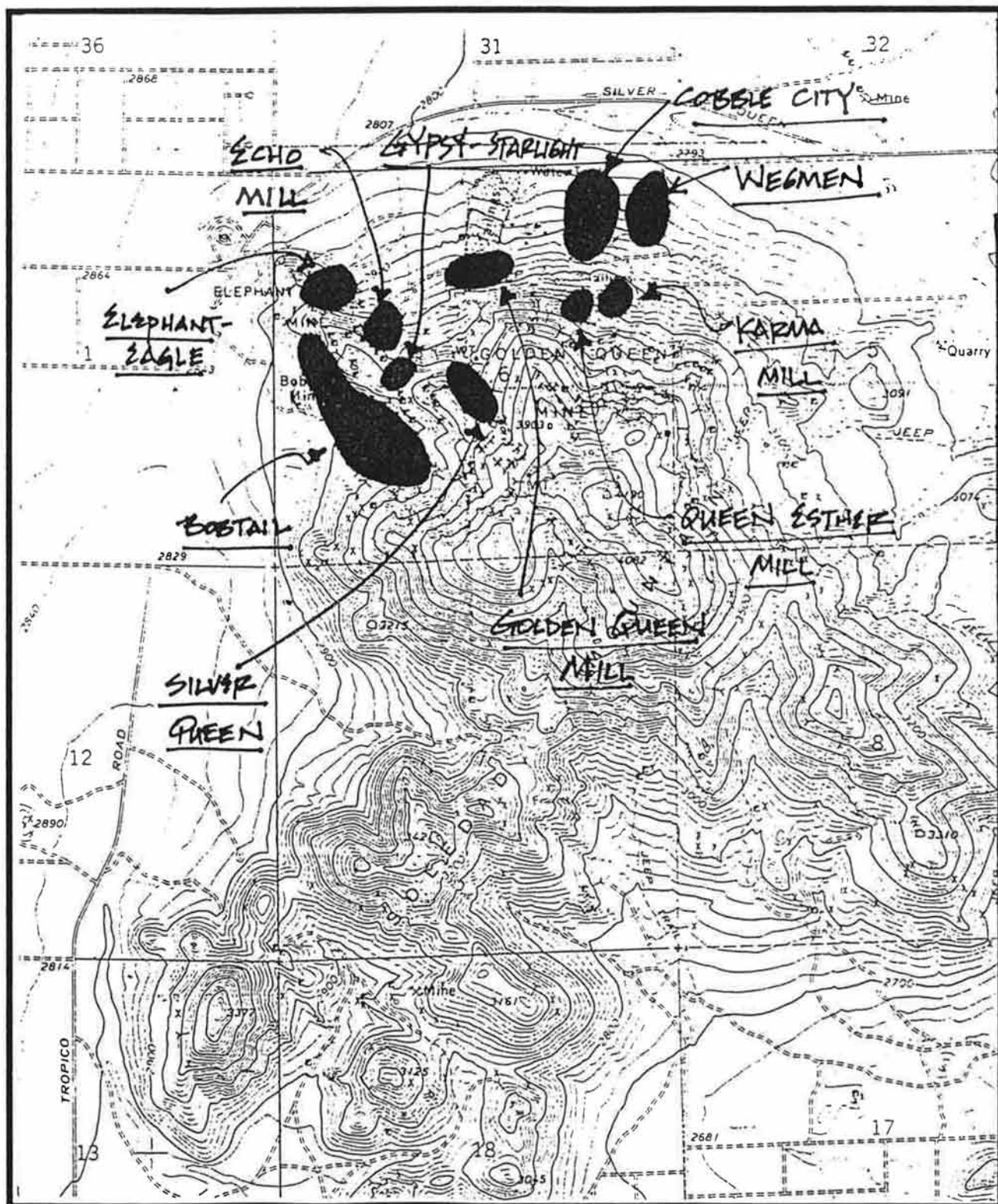
W & S Consultants
2242 Stinson St.
Simi Valley, CA 93605

Permanent Trinomial: *KSR-4455H*
Temp. Design: Elephant-Eagle

Page 1 of 4 .

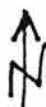
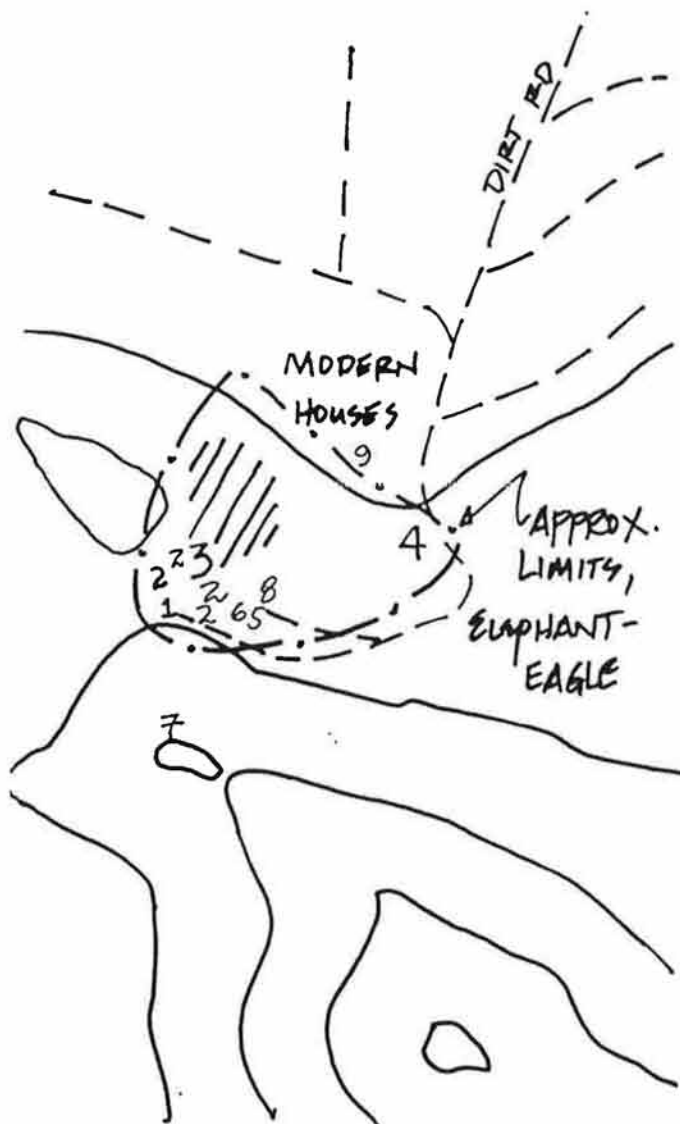
1. County: KERN
2. USGS Quad: SOLEDAD MTN. 7.5 Photorevised: 1973
3. UTM Coordinates: Zone 11: ³90450 mE ³⁸72425 mN
4. Twp. 10N Rng. 12W; NE 1/4 NE 1/4 SW 1/4 NW 1/4
Section 6 Base (Mer) MDM/SBB
5. Map coordinates: 44 mms 186 mmE 6. Elevation: 2960
7. Location: On NW side of Soledad Mtn, ~5 miles SW of Mojave
8. Prehistoric: Historic: XX Protohistoric:
9. Site description: Depression era & later gold mill
10. Area: 100 m (N/S) x 120 m (E/W); 12000 m².
Method of determination: TAPED
11. Depth: none Method of Determination: Subsurface Probing
12. Features: Remnant foundations of mill, modern ore chutes (made of re-used lumber), gyratory crusher ("WW GIBSON PATENTED"), modern houses
14. Non-artifactual constituents: NONE NOTED
15. Date recorded: 10/10/95
16. Recorders: Whitley and Simon
17. Affiliation & address: W&S CONSULTANTS, 2242 STINSON ST, SIMI VALLEY 93065
18. Human remains: NONE
19. Site Integrity: Poor. Few assoc'd artifacts. Facility used continuously to this day (e.g., modern plywood building now on original mill machine building foundation). No original structures standing, & no intact deposits.
20. Nearest water: NONE
21. Largest body of water w/in 1 km: NONE
22. Vegetation in vicinity: Creosote scrub
23. Vegetation on site: Same
References: Munz 1974
24. Site soil: Sandy colluvium 25. Surrounding soil: same
26. Geology: Soledad Mtn 27. Landform: Mtn slope
28. Slope: 0-2% 29. Exposure: N
30. Landowner & address: Golden Queen Mining Co., Rosamond
31. Remarks: Owned by Jesse Knight family since Depression.
32. References: Class III inventory, Soledad Mtn ; see also Tucker, 1935, Mining Activity at Soledad Mountain..., CA Div Mines Report 31:465-85.
33. Name of project: as above
34. Type of Investigation: Class III inventory
35. Site accession no.: n/a Curated at: n/a
36. Photos: Yes Taken by: Whitley
37. Photo accession no.: GQ On file at: W&S

USGS TOPO:
SOLEDAD MOUNTAIN
7.5; Scale 1 : 2000



ELEPHANT-EAGLE MILL AREA
SKETCH MAP

1" : 400'



(SEE ATTACHED KEY TO FEATURES)

SITE FEATURES

PAGE 5 OF 5.

FEATURE # DESCRIPTION

COMMENTS

ELPHANT-EAGLE MILL
SITE AREA

Elephant-Eagle

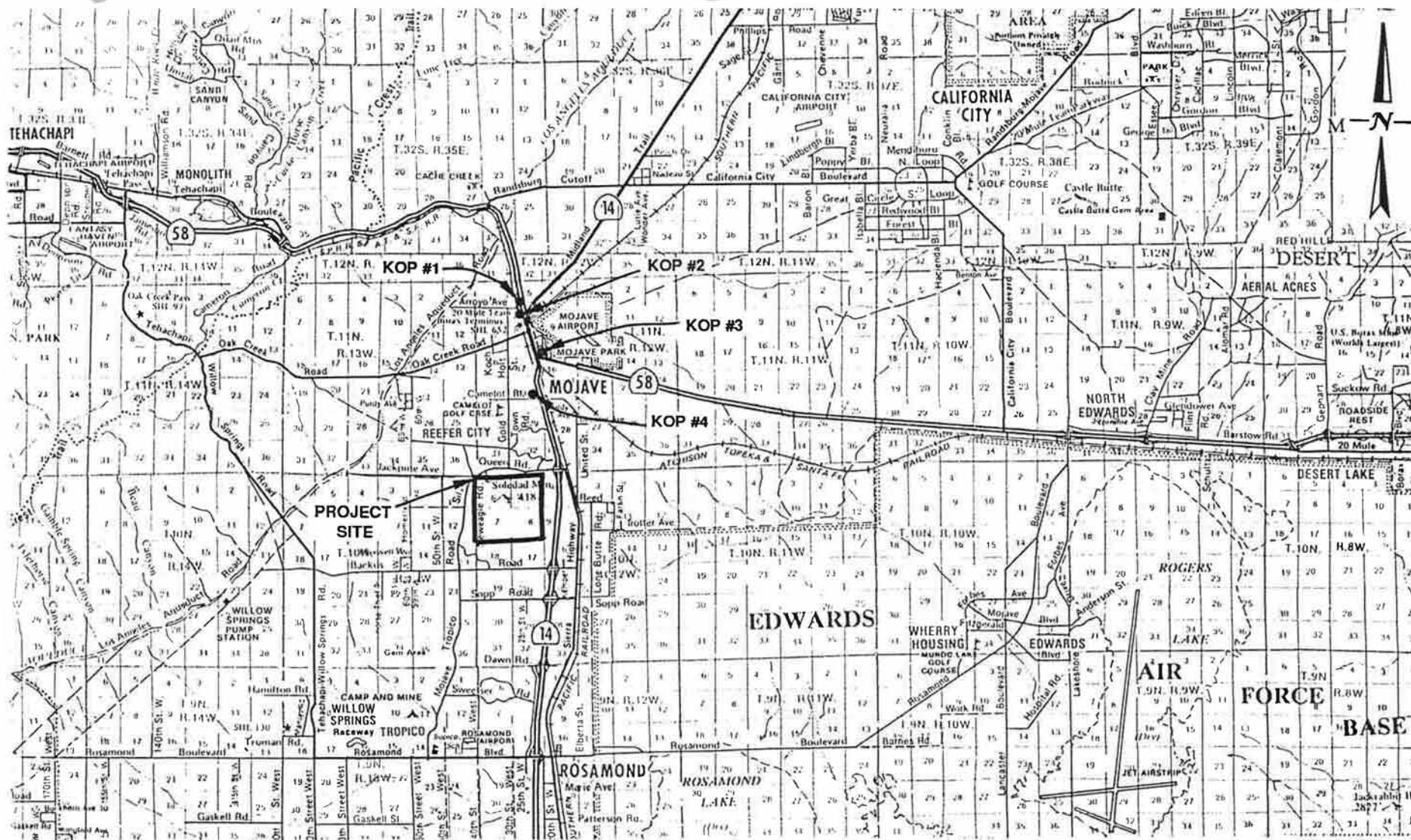
1	Metal building	Modern
2	Ore chute	Modern
3	Mill foundations	
4	Boarding house pad	Burnt & disturbed
5	METAL BLDG	MODERN
6	CONCRETE FDN	
7	MACHINE ROOM FDN	
8	ASSAY DUMP	MODERN
9	GYRATORY CRUSHER	"GIBSON"

APPENDIX XI

VISUAL IMPACT ANALYSIS

The visual resources of the project area were investigated using methods outlined in Section 8400 of the BLM Manual. Using these methods, the resources are analyzed by considering the scenic quality, viewer sensitivity and the distance between the viewer and the proposed modification of the landscape. The BLM visual resource management (VRM) system, which was developed by the BLM for identifying, evaluating and classifying visual resources of public lands, assigns a management class rating from I through IV by inventorying and evaluating both scenic quality and the sensitivity of a landscape. Discussions with Mr. Dave Wash at the BLM Office in Ridgecrest indicate that the BLM has not assigned a VRM rating to lands in the project area.

Contrast ratings were conducted from four (4) selected viewing locations, using methods outlined in Section 8400 of the BLM Manual. These Key Observation Points (KOPs), shown in Exhibit 1, were selected to represent the view from the intersections of major highways and local roads which carry the majority of traffic flow in the Mojave area and represent locations where the general public will view the project site. All photographs represent the view from the passenger seat of an automobile located at the KOP.



0 Miles 2mi 4mi 6mi
0 Kilometers 5km 10km

WZI INC.
BAKERSFIELD, CALIFORNIA

**GOLDEN QUEEN MINING
SOLEDAD MOUNTAIN PROJECT**

**VISUAL IMPACT ANALYSIS
KEY OBSERVATION POINTS (KOP)**

DATE	11/95	0733.0010	EXHIBIT	1
------	-------	-----------	---------	---

KOP #1 represents a view of the project area from Highway 58 and Arroyo Avenue north of Mojave. This intersection provides access to residential housing and is inside the 30 mile per hour speed zone approaching Mojave from the north. The foreground view is composed of power poles, highway signs, billboards and railroad tracks. The middleground is composed of power poles, residential housing and open space. The background is composed of Soledad Mountain and other distant mountains. Photographs 1 and 1A illustrate the existing conditions and a photographic simulation of the Proposed Action respectively. Photograph 1B is an enlargement of the photographic simulation with labels and outlines to identify the Proposed Actions.

H-8431-1 - VISUAL RESOURCE CONTRAST RATING

Visual Contrast Rating Worksheet

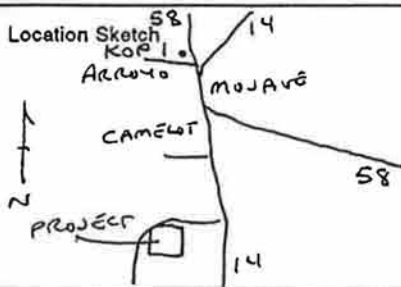
VISUAL CONTRAST RATING WORKSHEET BASED ON UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT GUIDELINES				Date <u>JANUARY 2, 1995</u>											
				Project _____											
				Project No. _____											
SECTION A. PROJECT INFORMATION															
1. Project Name <u>SOLEADO MOUNTAIN PROJECT</u>				4. Location Township <u>10N</u> Range <u>13W</u> Section <u>5, 6, 7, 8</u> <u>SAN BERNARDINO</u> <u>B & M</u>		5. Location Sketch 									
2. Key Observation Point <u>HWY 58 & ARROYO AVE.</u>															
3. VRM Class <u>UNCLASSIFIED</u>															
SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION															
1. LAND/WATER		2. VEGETATION		3. STRUCTURES											
FORM	<u>FRS: FLAT, SMOOTH, REGULAR</u> <u>BACK: COMPLEX, RUGGED</u>	<u>COARSE, ROUND</u>		<u>LINER, HORIZONTAL, RECTANGULAR</u>											
LINE	<u>FRS: STRONG EDGES</u> <u>BACK: BOLD, ANGULAR</u>	<u>WEAK, SOFT</u>		<u>STRAIGHT, ANGULAR</u>											
COLOR	<u>FRS: GREY, TAN</u> <u>BACK: TAN, BROWN</u>	<u>BROWN, RED, GREEN</u>		<u>BROWN, WHITE, GREY</u>											
TEXTURE	<u>FRS: SMOOTH</u> <u>BACK: RUGH</u>	<u>MEDIUM, SPARSE, RANDOM</u>		<u>SPARSE, PATCHY</u>											
SECTION C. PROPOSED ACTIVITY DESCRIPTION															
1. LAND/WATER		2. VEGETATION		3. STRUCTURES											
FORM	<u>SOLID, GEOMETRIC, SMOOTH</u>	—		—											
LINE	<u>ANGULAR, CURVED</u>	—		—											
COLOR	<u>BROWN, TAN</u>	—		—											
TEXTURE	<u>SMOOTH, CONTRASTY</u>	—		—											
SECTION D. CONTRAST RATING ☒ SHORT TERM ☐ LONG TERM															
1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side) <u>N/A</u>	
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Mod.	Weak	None	Strong	Mod.	Weak	None	Strong	Mod.	Weak	None	3. Additional mitigating measures recommended ☐ Yes ☒ No (Explain on reverse side) Evaluator's Name <u>DAVID A. WEISS</u> Date <u>1/2/95</u>	
			—					—			—				
				—								—			
				—								—			
				—								—			



EXHIBIT 1 - KOP #1 PRE-MINING PHOTOGRAPH



EXHIBIT 1A - KOP #1 POST-MINING PHOTOGRAPHIC SIMULATION



EXHIBIT 1B - KOP #1 POST-MINING PHOTOGRAPHIC ENLARGEMENT

KOP #2 represents a view of the project area from Highways 58 and 14 north of Mojave. This intersection is controlled by a traffic signal. The foreground view is composed of power poles, highway signs, billboards and railroad tracks. The middleground is composed of power poles, residential housing and open space. The background is composed of Soledad Mountain and other distant mountains. Photographs 2 and 2A illustrate the existing conditions and a photographic simulation of the Proposed Action respectively. Photograph 2B is an enlargement of the photographic simulation with labels and outlines to identify the Proposed Actions.

H-8431-1 - VISUAL RESOURCE CONTRAST RATING

Visual Contrast Rating Worksheet

VISUAL CONTRAST RATING WORKSHEET BASED ON UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT GUIDELINES				Date <u>JANUARY 2, 1995</u>											
				Project _____											
				Project No. _____											
SECTION A. PROJECT INFORMATION															
1. Project Name <u>SOLEOAP MOUNTAIN PROJECT</u>				4. Location Township <u>10 N</u> Range <u>13 W</u> Section <u>5, 6, 7, 8</u> <u>SAN BERNARDINO</u> <u>B & M</u>		5. Location Sketch 									
2. Key Observation Point <u>HWYS 58 & 14 NORTH</u> <u>OF MOJAVE</u>															
3. VRM Class <u>UNCLASSIFIED</u>															
SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION															
1. LAND/WATER		2. VEGETATION		3. STRUCTURES											
FORM	FRS: FLAT, SMOOTH BCK: COMPLEX, RUGGED	COARSE, ROUNDED		VERTICAL, LINEAR, RECTANGULAR											
LINE	FRS: STRONG EDGES BCK: BOLD, ANGULAR	WEAK, IRREGULAR, SOFT		VERTICAL, STRAIGHT, GEOMETRIC											
COLOR	FRS: TAN BCK: TAN, BROWN	GREEN, BROWN		GRAY, BROWN, GREEN											
TEXTURE	FRS: SMOOTH BCK: ROUGH	RANDOM, MEDIUM		SPARSE, ORPUSO											
SECTION C. PROPOSED ACTIVITY DESCRIPTION															
1. LAND/WATER		2. VEGETATION		3. STRUCTURES											
FORM	<u>SOLID, GEOMETRIC, SMOOTH</u>	—		—											
LINE	<u>ANGULAR, CURVED</u>	—		—											
COLOR	<u>TAN, BROWN</u>	—		—											
TEXTURE	<u>SMOOTH, CONTRASTY</u>	—		—											
SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM															
1. DEGREE OF CONTRAST		FEATURES								2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side) <u>N/A</u>					
		LAND/WATER BODY (1)				VEGETATION (2)						STRUCTURES (3)			
		Strong	Mod.	Weak	None	Strong	Mod.	Weak	None	Strong	Mod.	Weak	None	3. Additional mitigating measures recommended ☐ Yes ☒ No (Explain on reverse side)	
		FORM ☐ LINE ☐ COLOR ☐ TEXTURE ☐												Evaluator's Name <u>DAVID A. WESS</u> Date <u>1/2/95</u>	



EXHIBIT 2 - KOP #2 PRE-MINING PHOTOGRAPH



EXHIBIT 2A - KOP #2 POST-MINING PHOTOGRAPHIC SIMULATION



EXHIBIT 2B - KOP #2 POST-MINING PHOTOGRAPHIC ENLARGEMENT

KOP #3 represents a view of the project area from Highways 58 and 14 in downtown Mojave. This intersection is controlled by a traffic signal. The foreground view is composed of power poles, highway signs, billboards and railroad tracks. The background is composed of Soledad Mountain. Photographs 3 and 3A illustrate the existing conditions and a photographic simulation of the Proposed Action respectively. Photograph 3B is an enlargement of the photographic simulation with labels and outlines to identify the Proposed Actions.

H-8431-1 - VISUAL RESOURCE CONTRAST RATING

Visual Contrast Rating Worksheet

VISUAL CONTRAST RATING WORKSHEET BASED ON UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT GUIDELINES				Date <u>JANUARY 2, 1995</u>											
				Project _____											
				Project No. _____											
SECTION A. PROJECT INFORMATION															
1. Project Name <u>SOLEADO MOUNTAIN PROJECT</u>				4. Location Township <u>10N</u> Range <u>13W</u> Section <u>5, 6, 7, 8</u> <u>SAN BERNARDINO</u> B & M _____		5. Location Sketch 									
2. Key Observation Point <u>HWYS 14 & 58 IN MOJAVE</u>															
3. VRM Class <u>UNCLASSIFIED</u>															
SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION															
1. LAND/WATER		2. VEGETATION		3. STRUCTURES											
FORM	<u>FORG: FLAT, VERTICAL, LINEAR</u> <u>BACK: COMPLEX, RUGGED</u>	<u>COARSE, ROUND</u>		—											
LINE	<u>FORG: BOLD, STRAIGHT</u> <u>BACK: BOLD, ANGULAR</u>	<u>WEAK, SOFT</u>		—											
COLOR	<u>FORG: GRAY, TAN</u> <u>BACK: TAN, BROWN</u>	<u>BROWN</u>		—											
TEXTURE	<u>FORG: SMOOTH, FINE</u> <u>BACK: RAUGH</u>	<u>SPARSE, RANDOM</u>		—											
SECTION C. PROPOSED ACTIVITY DESCRIPTION															
1. LAND/WATER		2. VEGETATION		3. STRUCTURES											
FORM	<u>SOLID, GEOMETRIC, SMOOTH</u>	—		—											
LINE	<u>ANGULAR, CURVED</u>	—		—											
COLOR	<u>BROWN, TAN</u>	—		—											
TEXTURE	<u>SMOOTH, CONTRASTY</u>	—		—											
SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM															
1. DEGREE OF CONTRAST		FEATURES								2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side) <u>N/A</u>					
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				3. Additional mitigating measures recommended ☐ Yes ☒ No (Explain on reverse side)	
		Strong	Mod.	Weak	None	Strong	Mod.	Weak	None	Strong	Mod.	Weak	None		
FORM			—					—			—			Evaluator's Name <u>DAVID A. WEISS</u> Date <u>1/2/95</u>	
LINE				—				—				—			
COLOR				—				—				—			
TEXTURE				—				—				—			



EXHIBIT 3 - KOP #3 PRE-MINING PHOTOGRAPH

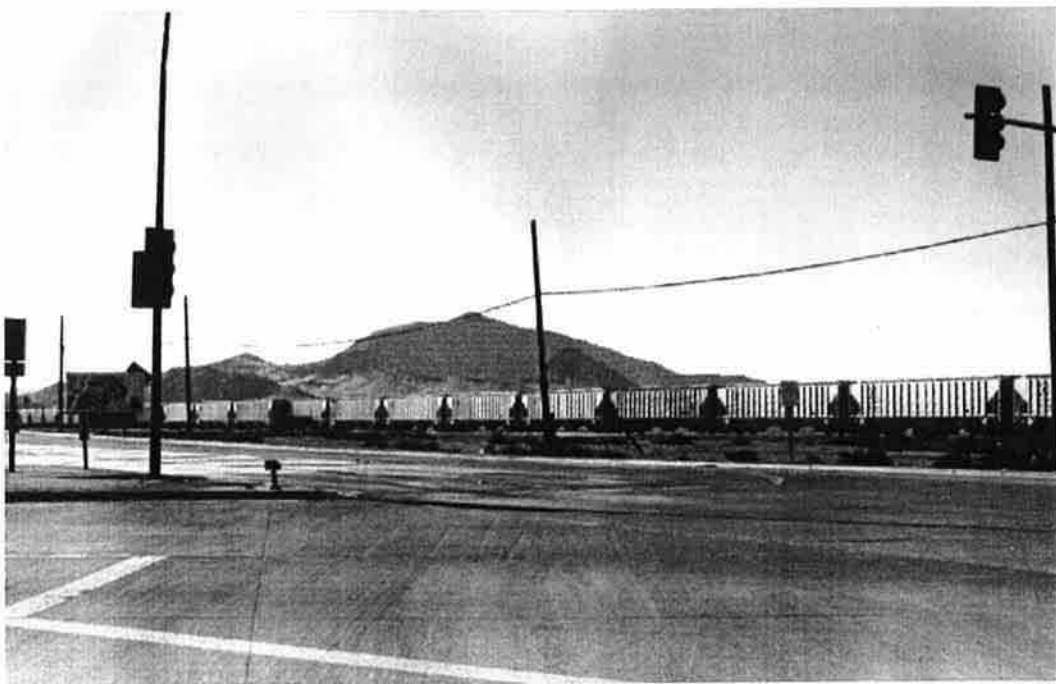


EXHIBIT 3A - KOP #3 POST-MINING PHOTOGRAPHIC SIMULATION

KOP #4 represents a view of the project area from Highway 14 and Camelot Boulevard south of Mojave. This intersection provides access to residential housing at the Camelot housing tract. The foreground view is composed of pavement, highway signs and markers for various buried utilities. The middleground is composed of open space and the existing Granite Construction Company aggregate operations at Standard Hill. The background is composed of Soledad Mountain. Photographs 4 and 4A illustrate the existing conditions and a photographic simulation of the Proposed Action respectively. Photograph 4B is an enlargement of the photographic simulation with labels and outlines to identify the Proposed Actions.

H-8431-1 - VISUAL RESOURCE CONTRAST RATING

Visual Contrast Rating Worksheet

VISUAL CONTRAST RATING WORKSHEET BASED ON UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT GUIDELINES				Date <u>JANUARY 2, 1995</u>											
				Project											
				Project No.											
SECTION A. PROJECT INFORMATION															
1. Project Name <u>SULFOAD MOUNTAIN PROJECT</u>				4. Location Township <u>10 N</u> Range <u>13 W</u> Section <u>5, 6, 7, 8</u> <u>SAN BERNARDINO</u> <u>B & M</u>		5. Location Sketch 									
2. Key Observation Point <u>HWY 14 & CAMELOT BLVD.</u>															
3. VRM Class <u>UNCLASSIFIED</u>															
SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION															
1. LAND/WATER		2. VEGETATION		3. STRUCTURES											
FORM	<u>FOR: FLAT</u> <u>BACK: COMPLEX, RUGGED</u>	<u>COARSE, ROUNDED</u>													
LINE	<u>FOR: BOLD, STRAIGHT</u> <u>BACK: BOLD, ANGULAR</u>	<u>WEAK SOFT</u>													
COLOR	<u>FOR: GREY, TAN, YELLOW, RED</u> <u>BACK: BROWN, TAN</u>	<u>TAN, BROWN</u>													
TEXTURE	<u>FOR: MEDIUM, ROUGH</u> <u>BACK: ROUGH</u>	<u>MEDIUM, RANDOM</u>													
SECTION C. PROPOSED ACTIVITY DESCRIPTION															
1. LAND/WATER		2. VEGETATION		3. STRUCTURES											
FORM	<u>SOLID, GEOMETRIC, SMOOTH</u>														
LINE	<u>ANGULAR, CURVED</u>														
COLOR	<u>BROWN, TAN</u>														
TEXTURE	<u>SMOOTH, CONTRASTY</u>														
SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM															
1. DEGREE OF CONTRAST		FEATURES								2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side) <u>N/A</u>					
		LAND/WATER BODY (1)				VEGETATION (2)						STRUCTURES (3)			
		Strong	Mod.	Weak	None	Strong	Mod.	Weak	None	Strong	Mod.	Weak	None	3. Additional mitigating measures recommended ☐ Yes ☒ No (Explain on reverse side)	
FORM															
LINE															
COLOR															
TEXTURE															
														Evaluator's Name <u>DAVID A WEISS</u> Date <u>1/2/95</u>	



EXHIBIT 4B - KOP #4 POST-MINING PHOTOGRAPHIC ENLARGEMENT



EXHIBIT 4 - KOP #4 PRE-MINING PHOTOGRAPH

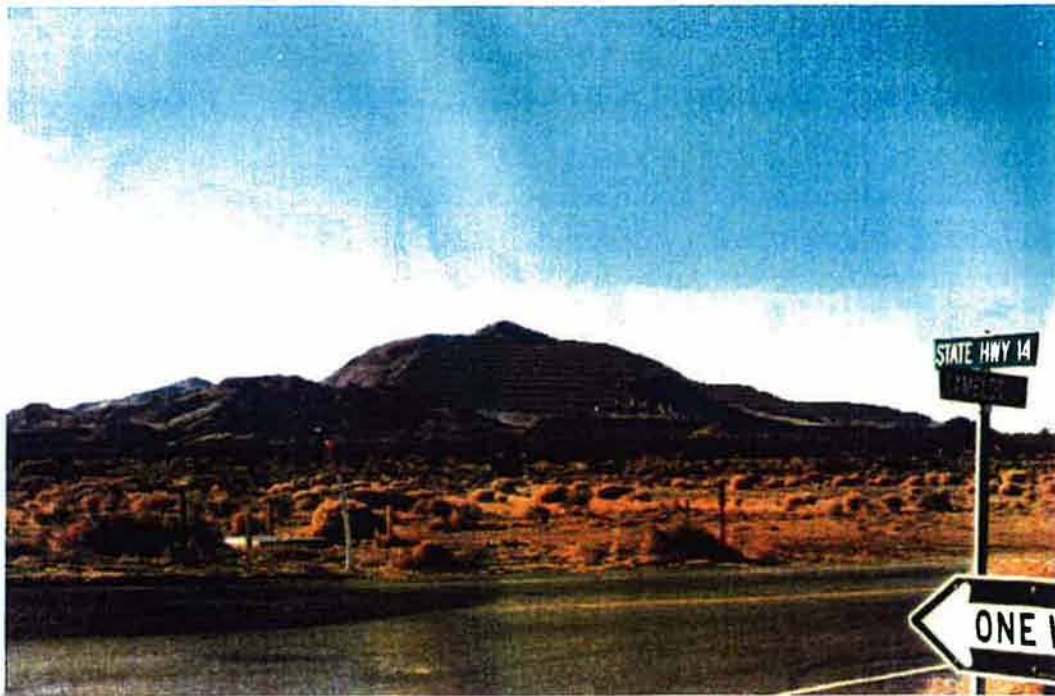


EXHIBIT 4A - KOP #4 POST-MINING PHOTOGRAPHIC SIMULATION